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ORIGINAL ARTICLES.

THE DEATH-RATE OF LYING-IN HOSPITALS IN THE UNITED STATES.¹

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STATISTICS showing the death-rate in general hospitals, while interesting and instructive in themselves, are of little value for purposes of comparison, for the class of cases treated in one institution can differ so much from that in another as to make any comparison between the two impossible. This is true to a much less degree of hospitals devoted to the reception of women about to be confined; here the conditions are constant, the affection to be treated is always the same.

The collection and comparative analysis of the statistics of such institutions has been brought to a condition of great perfection in Europe, especially in Germany, with the result of exciting a spirit of emulation among the authorities of the obstetrical hospitals as to which one of them shall possess the best record, and the wide publication of these reports has had, moreover, the very valuable effect of making it impossible that a hospital should have a conspicuously bad record without giving some explanation for it. Such a collection of statistics in regard to the lying-in hospitals of this country does not exist; to supply this deficiency, therefore, the writer has devoted considerable time and attention, with the result of obtaining the records of 19,902 confinements during the six years, 1880-1885, divided among 34 hospitals.

Of the importance of possessing such knowledge it is almost unnecessary to speak. By placing the statistics in a tabulated form, the records of those hospitals which are unusually good may be compared with those that are conspicuously bad, and if the divergence in results between them is great some explanation for this fact must be sought. Then, again, the total result, the average mortality, may be compared with the average hospital mortality in other countries, and, most important of all, it will be necessary to contrast the mortality of obstetrics in hospital practice with that of general practice, as on the result of this comparison should depend the very existence of these institutions; for it must be conceded that no hospital, whether supported by the community or by private charity, has the right to subject its inmates to a danger of death much greater than if they had remained in their own homes, no matter how squalid they might be.

The study of the following statistical table, therefore, will be divided under three heads: First, a study of the table itself, with a comparison of the individual records, and an explanation, if possible, of their wide divergence; second, a comparison of the average hospital mortality in this country with that of some other countries; and, third, a study of the relation that hospital mortality bears to the mortality of general practice.

Institution.	Total confinements, 1880-85.	Per cent. of	
		deaths.	deaths from sepsis.
Baltimore, Maternity	694	2.59	0.86
Boston, Lying-in Hospital	1599	3.81	3.10
New England, Moral Reform Society	191	0.00	0.00
Hospital for Women and Children	552	0.72	0.36
Brooklyn, St. Mary's Hospital	298	2.01	0.33
Maternity	552	1.63	1.44
King's County Hospital	834	2.63	1.19
Chicago, Women's and Children's Hospital	515	1.35	0.58
Women's Refuge	60	6.66	3.33
Cincinnati, St. Joseph's Lying-in Hospital	275	0.72	0.72
Cleveland, The Retreat	192	1.04	0.52
Detroit, Women's Hospital and Foundling's Home	295	4.74	3.05
Hartford Hospital	139	2.87	2.87
Indianapolis City Hospital	323	5.26	4.33
Louisville City Hospital	328	2.33	0.70
Minneapolis, Northwestern Hospital	45 ¹	4.44	2.22
Newark City Hospital	77 ²	3.89	2.59
New Orleans, Charity Hospital	808	5.32	2.97
New York, Blackwell's Island	2842	2.92	1.82
Nursery and Child's Hospital	1239	2.90	1.53
Infant Asylum	1057	1.79	0.85
Emigrant's Hospital, Ward's Island	871 ³	3.55	2.64
Foundling Asylum	847 ⁴	1.41	
Infirmiry for Women and Children	613	0.48	0.16
Asylum for Lying-in Women	464	1.29	0.32
Philadelphia, Almshouse Hospital	1099 ⁴	4.34	
Maternity	503	1.39	0.79
Women's College Hospital	458	2.83	1.52
Lying-in Charity	174	0.57	0.57
Pittsburg, City Hospital (Almshouse)	206 ⁵	3.53	2.65
Rochester City Hospital	139	0.71	0.71
Monroe Co. Hospital	93	1.07	1.07
St. Louis, Lying-in Hospital	623	1.92	1.28
Washington, Columbia Hospital	797	1.25	0.50

Total number of women delivered 19,902
 " " " " died 516

It cannot be claimed that the preceding list is a complete one of all the lying-in hospitals in this country; there were some that ignored repeated requests for their statistics, there were others that refused to give them, and still others whose records when obtained were found valueless for the purposes of this paper. In addition to these hospitals una-

¹ 1882-85. ² 1882-85.

³ Records prior to 1881 unreliable.

⁴ Causes of death not given.

⁵ Only reckoned for last three years.

¹ Read before the Philadelphia Obstetrical Society, March 3, 1887.

voidably omitted from the list there may be others of whose existence the writer is unfortunately ignorant. It is improbable, however, that the addition of any records that have been omitted would seriously affect the final result. The number of cases dealt with is so large as to insure the approximate accuracy of the conclusions arrived at.

A death-rate of 2.59 per cent. of the women confined. It must be surprising to one who has not devoted much attention to the subject to find that, of the women of this country who perform the perfectly physiological function of childbearing in hospitals designed for their reception at such a time, 1 out of every 38 must die. One looks involuntarily to the table to learn if this represents the true state of affairs in all lying-in hospitals. If they all have a death-rate closely approximating this, then the only conclusion possible is that such a mortality is inseparable from childbirth in hospitals. A mere glance, however, suffices to show that the onus of producing a mortality as high as 2.59 per cent. of the women confined, rests not upon all, but conspicuously upon a few. Ten hospitals may be selected whose average mortality is 4.48 per cent. of the women confined; or, of every 22 women who are compelled to seek shelter in these institutions, 1 will die. On the other hand, ten hospitals may be selected, of which the average mortality is only 0.87 per cent., in which 115 women must be delivered before 1 dies. Can there be a satisfactory explanation for a divergence in results so wide as this?

It has often been asserted that unmarried primiparæ form the most unfavorable class of cases possible; that, in addition to the primiparity which is acknowledged everywhere as an unfavorable factor in obstetrics, the shame connected with the illegitimate birth exerts an almost murderous influence in raising the mortality among these women.¹

It might, therefore, be expected that only hospitals devoted to this class of cases would be found among those contributing to raise the general mortality, while in those where the mortality was so low there would be found a large proportion of multiparæ. Again, a reference to the table of statistics will show the truth or the fallacy of this surmise. We shall find that the record of the Maternity Hospital of Philadelphia, an institution devoted entirely to the care of unmarried primiparæ, will show a death-rate of 1.39 per cent., while the Boston Lying-in Hospital, in which more than half the patients are married women and presumably multiparæ, although the annual reports give no information on this point, has a mortality of 3.81 per cent.

It may also be claimed that a high mortality is inseparable from a lying-in hospital that deals with a large number of women yearly; but if this is the case, it must be due to over-crowding, which can occur just as well in a small as in a large hospital, but is unjustifiable in either. And, in fact, if we look again to the table, we shall find the highest mortality in a hospital which reports only 60 cases for the six years. It is useless to look further for a

satisfactory explanation for the high death-rate that prevails in many of our lying-in hospitals, for no good reason can be found, and the conviction is forced upon us that such excessive mortality is utterly unjustifiable. That this is true and that, even in institutions whose previous record had been simply shocking, an earnest effort toward improvement will accomplish much, is shown by the following table of the death-rate by years in two large hospitals.

DEATH-RATE PER CENT. OF WOMEN CONFINED.

Institution.	1880.	1881.	1882.	1883.	1884.	1885.
Boston, Lying-in Hospital	5.58	3.18	6.00	5.88	1.94	1.31
Philadelphia, Blockley Almshouse	6.01	4.08	3.92	7.31	3.19	1.52

The sudden decrease in the mortality of the Boston Lying-in Hospital, in 1884, was the result of a letter calling the attention of the managers to the really murderous death-rate of former years in that institution. The improvement begun in 1885 in the Philadelphia Almshouse still continues, the death-rate for the past year having been only 0.87 per cent. It is also gratifying to note the gradual improvement for the whole country shown in the following table:

Years.	Women confined.	Women died.	Death-rate per ct.
1880	2800	85	3.03
1881	3320	78	2.34
1882	3272	90	2.74
1883	3207	121	3.77
1884	3595	67	1.86
1885	3704	75	2.02

This improvement is not steady, but, as may be seen, the death-rate for the last two years is lower than for any two years previous.

To conclude the study and analysis of the table of statistics, it would be well to fix a maximum mortality for lying-in hospitals, beyond which none should go without giving a satisfactory explanation. We have seen that there are 10 hospitals on the list with an average mortality of only 0.87 per cent., and among these hospitals are some which deal with the worst class of cases imaginable. It would seem, therefore, reasonable and liberal to fix this limit at 1.5 per cent. of the women confined, and I am happy to say that in future the State Board of Charities in Pennsylvania will probably demand annual reports from the lying-in hospitals throughout the State, in order that if any one of them shows an excessive death-rate, that fact may be pointed out to the managers of the hospital with a request for an effort to secure better results.

Now we may pass to the second division of the subject and compare the records of lying-in hospitals in this country with those of some hospitals in the most highly civilized states of Europe.

It would be impossible, were it necessary or desir-

¹ Tait: Hospital Mortality.

able, to present a complete list of the lying-in hospitals, with their statistics, of the foremost countries of Europe. The brief little table that follows, however, will supply us with sufficient material to enable us to contrast the mortality of child-birth in hospitals here with the hospital mortality of some other countries.

	Period.	Delivered.	Death-rate per cent.
Germany, 47 hospitals . . .	1874-83	104,328	1.37
England, 10 hospitals ² . . .	1870-75	18,369	1.05
Vienna, I. Geburts. u. Gyn. klinik des Allgemeinen krankenhaus. ³ . . .	1880-85	15,070	0.70
Vienna, II. Geburts. u. Gyn. klinik des Allgemeinen krankenhaus ⁴ . . .	1882-85	8,355	0.52
Paris, Maternité ⁵	1876-82	1,223	0.49

We shall have little cause for congratulation if we compare the records of our lying-in hospitals with those of the 47 German hospitals collected and published by Professor Dohrn. These hospitals, although dealing with an immense number of women and making use of them, as a rule, for purposes of instruction, present a record twice as good as our own. The English hospitals, whose records are given by Tait, even ten years ago presented a very much better showing than ours do to-day; and when we see the really astonishing results achieved in the obstetrical clinic of the General Hospital in Vienna, where under one roof more women are delivered in a year than in all the hospitals of the United States, we have still greater reason for dissatisfaction with what we have done in this direction, especially as there can be no good reason why we should occupy such a disadvantageous position in this international comparison, for with our greater wealth and the superior physical and mental condition of our populace, as compared with the peasantry of Europe, we should in every lying-in hospital strive, at least, to equal the results obtained by Tarnier in 1884, when, in the Maternité, he had 1000 successive accouchements with but a single death.⁶

Finally, in order to determine the relation that hospital mortality bears to the mortality of general obstetrical practice, we are confronted by the necessity of fixing a normal death-rate after childbirth, of knowing how many women die during or after labor in a large city; for to make the comparison with hospital results a just one, we must have in both cases the same environment.

The almost insuperable difficulty of determining the exact mortality of obstetrical practice in a large community will be at once apparent. If we consult the city's official record of deaths, we may be sure

that many of those which are attributed to pyæmia and septicæmia really occurred during the puerperium, and that often a death directly connected with childbirth will, from ignorance, carelessness or design of the attendant, be ascribed to some other cause. The experience of the Registrar-General¹ of England in 1882 will be interesting in this connection. In that year there were reported, without further specification, 413 deaths from septicæmia and pyæmia, and 430 deaths from peritonitis, of women of childbearing age. A careful inquiry developed the fact that of the first group (413 deaths) 123 were due to childbirth, and that of the second group (430 deaths) 179 followed childbirth; in both groups of cases more than half the inquiries remained unanswered. This addition to the number of deaths after childbirth raised the mortality among the women who had been delivered in 1882 by 0.1 per cent., making the death-rate for the year throughout England 0.5 per cent. We may realize, therefore, how little reliance is to be placed upon official records if we would learn the true death-rate in obstetrical practice in a large city, where many of the women in labor fall into the hands of ignorant midwives or of physicians not much more skilful. I may as well at once assert my belief that this death-rate will closely approximate, if, indeed, it does not exceed, 1 per cent. of the women confined; but as there will be many, from the days of Le Fort to the present time, who will dispute the truth of this statement, it becomes necessary to support it by proofs that, to me at least, are convincing.

If we are unable to look for these proofs in our own official records, we have, nevertheless, several methods² at our command by which we may obtain the information desired. We might, as Tarnier once did, ascertain the number of women of childbearing age who had died in a certain district, and if by the record of births it was shown that any one of these women had given birth to a child within a month of her death, the death might be ascribed to childbirth. This method, if the record of births and deaths be reliable, can be depended upon to give a fairly accurate idea of the number of deaths from all causes after childbirth. We might, on the other hand, consult the records of other cities or countries which we have reason to believe more accurate than our own, or we may learn the results of the private practice of obstetricians who have attended a large number of women and have kept a careful record of their cases. Again, we might adopt McClintock's³ plan in order to obtain the number of deaths from all causes after childbirth, including those from non-puerperal causes, as such deaths must sometimes contribute to raise the mortality of hospitals. Collecting the results of the house practice of nine reliable physicians in 16,774 cases, McClintock found that more than a quarter of the deaths after childbirth were due to non-puerperal causes. If, therefore, 25 per cent. is added to the number of deaths appearing in a city's

¹ Dohrn: Zeitschr. f. Geburts. u. Gyn., B. xii. H. 1.

² Lawson Tait: Hospital Mortality.

³ Carl Braun: Beilage zu Nr. 35, der Wiener Mediz. Woch., 1886.

⁴ Ehrendorfer: Archiv f. Gyn., B. xxvii. H. 2.

⁵ Tarnier: Bulletin et Mémoires de la Société Médicale des Hôpitaux de Paris, 1882.

⁶ Annales de Gynécologie, 1884.

¹ Annual Report, 1883.

² Garrigue: Transact. of the American Gyn. Soc., 1877.

³ Dublin Quarterly Journal, 1869.

records as due to childbirth, a fair idea of the total mortality among puerperal women will be obtained.

Employing Tarnier's method, in Glasgow and Edinburgh, Duncan¹ found the mortality among women after childbirth to be 0.93 per cent. Applying McClintock's method to the records of Paris, St. Petersburg, and Dublin, he found the mortality in those cities to be respectively 0.83, 0.89 and 1.16 per cent. of women confined. By a careful analysis of the records preserved in the Health Department of New York City, Lusk² found that 1.17 per cent. of the women confined in New York, during the years 1868-75, died as a consequence of childbirth. In the Duchy of Baden there were delivered, in the year 1884, 54,996 women.³ Of these, 0.4 per cent. died of puerperal fever; 0.7 per cent. died after the performance of the different obstetrical operations, from accidents during labor, or from eclampsia; but the cause of death in some of these cases was undoubtedly septic poisoning, and they would consequently be included in the first percentage, so that the death-rate cannot be estimated by adding these two percentages together, which would make 1.1 per cent., but the death-rate is probably not less than 0.9 per cent. of the women confined, and this in an agricultural district containing no very large towns and with a comparatively healthy and prosperous population.

A. H. McClintock,⁴ speaking before the British Medical Society, gave the results achieved in private obstetrical practice by nine reputable physicians, men of no mean skill and intelligence, as the following list will show:

Campbell (Paris), of 1500 cases	lost	13
Simpson	" 180 "	" 4
Matthews Duncan	" 736 "	" 8
McClintock	" 1000 "	" 12
Thos. Hamilton	" 402 "	" 7
Chas. Egan	" 400 "	" 8
W. T. Greene	" 1500 "	" 12
George Jones	" 2000 "	" 16
Uvedale West	" 3100 "	" 23
	10,818	103

A death-rate of 0.95 per cent.

These figures certainly seem to justify the assertion that, at least, 1 per cent. of the women delivered in a large city will die. If one hesitates to admit that such is the mortality associated with what is usually regarded as a simple physiological process, what shall be said of the death-rate attending confinement in the lying-in hospitals of this country, which is more than twice as great as that of general practice, and in individual instances four and five-fold greater?

The title, charitable, can be conferred upon many of these institutions only by the followers of Malthus; but as their existence has become a necessity in all populous communities, a necessity which will become more pressing as the population of this country becomes more densely concentrated at certain points and the poverty of the lower classes increases, surely

common humanity demands that they be controlled by State or municipal supervision, in order that they may fulfil the ends for which they were intended—that they may truly afford aid to a woman at a time when it is most urgently needed—and that they may not, as many of them do to-day, make childbearing as dangerous to the woman as an attack of typhoid fever or the performance of laparotomy.

CASE OF DERMATITIS HERPETIFORMIS OF THE PUSTULAR VARIETY.

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IN reporting the notes of a case of a rare disease no apology therefor need be made, for the reason that any information on the subject must prove valuable. The disease under consideration being of infrequent occurrence, and, moreover, constituting a new field of observation, concerning which there seems to be some diversity of opinion among dermatologists, is for these and other reasons worthy of close investigation. With our present knowledge every case encountered is entitled to a place on record, with the hope that as the published data accumulate we shall better comprehend the process.

The following case was under my observation at intervals during a period of five years. At the time the disease seemed to me incomprehensible on account of the peculiar lesions, their behavior and course, which were altogether different from those of any affection with which I was familiar. Classification of the disease was beset with difficulties, as the original notes testify, and the case was regarded as an anomalous one—as representing, perhaps, an undescribed disease. The several provisional diagnoses (of eczema? of ecthyma? of tinea circinata?) made from time to time show the resemblance of the lesions to those of well-known affections, and give an idea of the multiformity displayed. The case, moreover, is interesting as exhibiting a phase of this peculiar disease that has not been brought out in any of the cases that I have previously reported. These features will be referred to later.

The patient came under notice in 1874, and the following history is an abstract of the notes taken at that date. Daniel Welsh, fifty years of age, Irish, and a hostler by occupation. He had previously been subject to "prickly heat" during the summer about the trunk, and was so affected year before last, this attack having been followed by a much more serious disease of the skin similar to that, he states, with which he now suffers. He describes the eruption he had at that date as being pustular and vesicular, with intense itching and burning. The itching was intolerable, and the disease continued for three months. Crusting followed the formation of the pustules, which remained for some time, the process eventually passing off with scaling. He recovered in the autumn, and remained well six months, when the present eruption appeared. It continued throughout the summer, becoming better toward autumn, but it never left him entirely.

¹ Matthews Duncan: Mortality of Childbed and Maternity Hospitals. Edin., 1871.

² The Science and Art of Midwifery, p. 645. New York, 1886.

³ Aertliche Mittheilungen aus Baden, Nr. 5, 1886.

⁴ British Medical Journal, Aug. 10, 1878.

About a month ago it began to grow worse. It is now confined to the trunk, shoulders, and buttocks, and is particularly well defined upon the abdomen and sides of the thorax. The lesions are disseminated, but possess certain herpetic features, and consist of numerous minute, small and large pustules, with yellowish contents, in all stages of development. They vary much in size, some being no larger than pin-points and pin-heads, while others have attained the size of peas and beans. The latter are not acuminate, but are flat and spread out, although considerably raised above the surrounding healthy skin. In outline the larger ones, as a rule, are oblong or irregular, and angular, and have an herpetic, "puckered" appearance. The small recent pustules are not attended with any redness of skin, having no inflamed base or areola; but the larger and older ones are surrounded with a deep red areola of considerable size. There are no vesicles. [A week's observation proved that this eruption began as a well-defined pustule, and continued as such until a crust formed, which became detached in four or five days, leaving a pigmented base.] In addition to the pustules there is considerable pigmentation, of a reddish, dirty-yellowish, brownish hue, which is present here and there over the surface in a marked degree, and is a conspicuous symptom, being much greater and more persistent than with other similar inflammatory processes.

The disease at present is almost without itching, burning, or other annoying symptoms. The eruption, he states, comes out in crops, one scarcely disappearing before another makes its appearance, and in this manner the process is kept up from week to week and month to month.

Such was the condition when admitted to the Dispensary for Skin Diseases, April 28, 1874. He was placed upon external and internal treatment, the disease being then regarded as pustular eczema. During the following month under the use of iron and arsenic and varied external remedies the cutaneous lesions increased. A few weeks later minute pustules began to appear in a grouped, circinate, herpetic form, as in typical *tinea circinata*, the appearances resembling an exaggerated phase of this latter disease, so much so that it was thought it might possibly be due to a vegetable parasite, but the microscopic examination revealed nothing of this nature.

Itching and heat now began greatly to annoy the patient, and within a week some of the circinate patches increased in size until they became two inches in diameter. The pustules were minute and small, and hence the picture did not suggest herpes iris. Two weeks later the attack subsided and the lesions rapidly disappeared, but only to reappear immediately as a new crop, as before, in the form of numerous pin-point and pin-head sized pustules. The following week another crop, numbering thousands of lesions, invaded the trunk, accompanied with burning but no itching. This attack increased in extent and severity, but the lesions remained small, a few only being as large as a pea. Scales and thin crusts formed in large patches, and scaling and exfoliation set in. The skin became intensely itchy

and hot, and he was unable to sleep, and was depressed and discouraged.

The patient now passed from under observation, having experienced no relief from the varied treatment which he had undergone. Five years afterward he again presented himself to me, still a sufferer with the same disease. An ointment containing sublimed sulphur one ounce, lard two ounces, and oil of walnuts two drachms, was now used, and with positive relief to the itching and burning, and with the remarkable result of causing the lesions rapidly to disappear. The inunctions were made with friction, as in the treatment of scabies. I subsequently saw him in several attacks, in one of which the pustules were herpetic and grouped, as previously, in a crescentic or more or less annular form, new lesions, moreover, showing themselves on the periphery of the patches, accompanied with much itching. The ointment referred to was again (and on later occasions) employed with the same admirable result, the patient stating that during the many years of his suffering this was the first and only remedy that had in any degree benefited him. He spoke of the relief to the subjective symptoms as being instantaneous, and looked forward to a speedy permanent cure. Whether or not this occurred I am unable to say, as shortly afterward he ceased attending the clinic.

The interesting points of the case are, first, that during the period I had the patient under observation the lesions remained pustular, being at times minute (not larger than pin-points and pin-heads), and on other occasions larger,—the size of peas and beans. At all times, even when the eruption might be regarded as being disseminated, they possessed herpetic features, being either (when of large size) seated upon an angry-looking, drawn-up, puckered base, or (when small) grouped in close proximity, sometimes in an annular form, as in *tinea circinata* and herpes iris. As characteristic of the disease, may be mentioned the disposition of the eruption to appear in crops; the pigmentation of the affected skin; the obstinacy of the process to treatment; the tendency to relapse; and the long duration of the disease as a whole. Finally, the subjective symptoms were peculiar, being at one time marked and at another time almost absent. The variations on this point were remarkable if the statements of the patient are to be relied on. The fact, however, of the lesions being pustular would account for the comparative freedom from itching, this symptom, as is well known, rarely accompanying pustular lesions of any kind.

ACCIDENTS ACCOMPANYING THE USE OF THE A.-C.-E. MIXTURE.

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IN THE MEDICAL NEWS of January 8th, Dr. John H. Packard relates an accident following the use of the A.-C.-E. mixture. He speaks of the few recorded cases of fatal or alarming results from its use. It has happened to the writer to see alarming symptoms accompanying its administration, which I will briefly relate from memory.

In the spring of 1865, while stationed at the U. S. A. "Summit" House General Hospital, Philadelphia, the staff were performing an amputation of the leg. At the suggestion of Surgeon Joseph Taylor, in charge, the A.-C.-E. mixture was used. The anæsthetic was administered by Surgeon A. A. Leavitt, Executive Officer of the Hospital. During the operation, the patient's respiration failed. The condition became so alarming that the operation was temporarily discontinued, and all present turned their attention to restoring the patient. Artificial respiration, cutaneous excitation, and inhalation of fumes of ammonia, fortunately, were successful. The operation was then finished, with the patient only partially unconscious. For many years I had not used this mixture, using either ether alone, or the mixture of ether two parts, chloroform one part, by weight; or, rarely, chloroform alone.

During the past two years, I have on several occasions used the A.-C.-E. mixture with gratifying results, being led to use it again by the favorable reports given by various authorities. During the summer of 1886 I was removing cancerous mammary and axillary glands—assisted by Drs. Martin and Chesney of Cairo, West Virginia. To Dr. Chesney was intrusted the administration of the anæsthetic, which was the A.-C.-E. mixture. During the operation I had requested him to discontinue the anæsthetic, as the patient was sufficiently under the influence. This he did; he had his finger on the pulse, and devoted his entire attention to the patient's condition. The mammary gland had been removed—care being taken by Dr. Martin to prevent entrance of air into the veins. I noticed the extreme pallor of the patient's face, and simultaneously Dr. Chesney said the pulse had failed, so as to be inappreciable. I immediately placed a bottle of nitrite of amyl to her nostrils—respiration was good. Asking Dr. Martin to hold it there, I prepared a hypodermatic syringe with 20 m. of tr. digitalis, and injected it in the precordial region. Dr. Martin meantime announced a slight recovery of pulse. I next administered several syringefuls (hypodermatically) of whiskey, and we had the pleasure of seeing the patient rally from this heart-failure—due, I think, to the depressing influence of the chloroform. It was carefully administered—with a sponge in a cone—*i. e.*, a towel stiffened with a sheet of paper in its folds; the sponge was held in its place in the apex by transfixing with long pins to prevent it falling down on the patient's face. The chloroform and ether were of reliable manufacture. It afterward developed that at this time the liver was involved in secondary cancerous inflammation, from which the patient succumbed a few weeks after recovery from the operation.

In the administration of ether alone, it has been my fortune to see on several occasions alarming symptoms due to the failure of the respiratory function. Several years ago Dr. Harris, of Parkersburg, West Virginia, and myself, were operating for laceration of the cervix uteri, assisted by Drs. Campbell and Hunt, of that city. The patient was in the semiprone position, Dr. Hunt administering the anæsthetic. She had been fully under its

influence some twenty minutes (pure sulphuric ether being used), when Dr. Hunt found that respiration had ceased. He immediately drew forward the tongue, and he and Dr. Campbell endeavored to excite respiration. Not succeeding promptly, I aided them by artificial respiration; our joint efforts being of no avail, I suggested to Dr. Harris to withdraw the speculum and aid us. By this time the scene was alarming; her female relatives present were shrieking, "She's dead," and it looked as if it was too true. Dr. Harris seizing her by the legs elevated the body. Almost immediately a gasp, and again a second, and the crisis was over. After respiration was fully restored, the operation was completed without further anæsthesia.

On several occasions I have seen under ether the respiration suspended, requiring the drawing forward of the tongue and efforts made to excite respiratory action, which each time promptly succeeded; once from the effects of the ether and chloroform mixture not being as carefully watched as it should be, while a friend and myself were effecting delivery of an impacted transverse foetus.

Dr. Packard speaks of the advisability of having "the administration confided to an assistant who should carefully watch its effects, paying no attention to anything else." Very true! but in general practice in the country this is impossible to secure: most frequently but two physicians are present, and the services of each are needed in the operation. Oftentimes the operator is alone—the assistants are such neighbors, male or female, as have the nerve to witness an operation, and the surgeon has to keep an eye on the patient's condition, as well as operate. This is unavoidable. It has been my duty to have to operate for fracture of the skull with depression in a child with no assistants except laymen; or again to amputate at the shoulder-joint under similar conditions, or to use anæsthetics repeatedly in difficult labor cases, with aid of one or two sensible women. It cannot be avoided, and the operator can, at least, only select the safest anæsthetic, enter upon his operation, exercising all vigilance possible, by instructing the layman intrusted with the anæsthesia what to look after, and then feel that if any accident occurs, the assuming of the responsibility is unavoidable to the man who has "the courage of his convictions." Still we must all feel that when the patient is fully anæsthetized there is a possibility of death ensuing; fortunately rare, but still possible.

In country practice it is not possible to go around "cap-a-pie," as described by Dr. Packard, with galvanic battery, etc., but we can take with us brandy, ammonia, tr. digitalis, and nitrite of amyl and a hypodermic syringe ready for use. While I have not seen any unfavorable results from chloroform alone, the conviction has been arrived at that it should not be used, except at times, to bring the patient under anæsthesia, where the struggling and excitement from ether render full anæsthesia from that agent very tardy or likely to fail, to be replaced by the ether as soon as the desired object is obtained.

Many fatal accidents are never reported. I know

of one death from ether occurring in Baltimore several years ago, where an operation was being performed for a uterine fibroid, in a patient very greatly reduced by hemorrhage. This, I believe, was never published. Again some years ago, a friend in one of our towns in West Virginia, told me of a fatal case from chloroform happening to him. I asked him if he had published an account of it. "No, indeed, I felt too badly, and besides, it was published enough, without my reporting it," was the substance of his reply. I have been told of others occurring in military practice during the late civil war, which have never been reported.

Death from shock even after trivial operations occasionally occurs; see case reported by Dr. Tompkins, of Charlestown, West Virginia, in the *Medical Record*, last year, in which death from shock followed excision of the uvula. A few days ago I saw alarming attacks of syncope, the result of a hypodermatic injection of one-twelfth of a grain of morphia for neuralgia, in a lady subject to such attacks. From such cases, we can only wonder that accidents do not more frequently occur.

A LARGE RETINAL VEIN CROSSING THE MACULAR REGION.

BY B. ALEX. RANDALL, A.M., M.D.,
OF PHILADELPHIA.

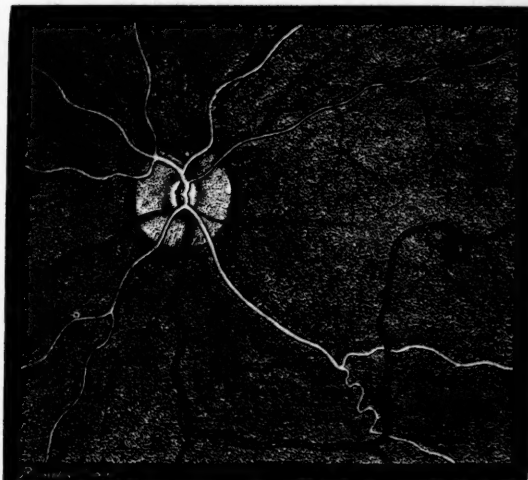
IN describing the vessels of the human retina, almost all authorities state emphatically that no vessels of notable size traverse the immediate neighborhood of the macula; and, to judge from the barren literature of the subject, exceptions to the rule would seem almost unknown. As it has been the writer's fortune to see several exceptions, he hopes that a record of the matter may have for others some of the interest which the cases have for himself.

The macular region is, of course, extremely vascular, as has been frequently shown, and as any one can see for himself by entoptoscopic methods; but these vessels are generally the most minute capillaries. Ayres¹ has shown in his drawing of this network, that one of his eyes has a rather larger vessel, discoverable with the ophthalmoscope, crossing the area usually non-vascular. Yet this is almost capillary in size, and it is safe to say that it would never have been seen objectively had not its presence been first subjectively proven. No note of a similar arrangement has to my knowledge been recorded by another observer.

The case of arterio-venous anastomosis which has been reported and figured by Mr. Marcus Gunn,² (and which I had the pleasure of studying at the meeting of March, 1884, of the British Ophthalmological), was notable also by reason of the unusual proximity to the macula of two conspicuous veins; and another closely similar case (not yet reported) which I observed in the practice of my colleague, Dr. Heyl, showed vessels of considerable size in the

macular region. In neither of these, however, was the macula intruded upon, and the following case seems to be unique.

A young lady of sixteen was examined and treated by my colleague, Dr. de Schweinitz, and myself, in October, 1885, on account of trouble with her eyes. There was blepharitis, which could be controlled but not cured by topical treatment, and considerable brow-pain at near work; no other asthenopic symptoms. The vision was normal and equal in the two eyes, the accommodation apparently subnormal (8 D.); there was insufficiency of convergence of about eight degrees by the v. Gräfe test; little or no astigmatism. The ophthalmoscope showed each nerve small, oval, and surrounded by an absorbing pigment ring. The upper and lower disk-margins were veiled by retinal haze and striation, and the retinal vessels were tortuous and relatively large. The choroid was disturbed, its stroma woolly, and its vessels unduly visible. There was low hypermetropia in each eye, with apparent difference of level of the vertical and horizontal vessels. The right eye showed nothing else noteworthy.



In the left eye a large vein, coming from the outer retina a little above the horizontal meridian, passed horizontally across the upper margin of the maroon-colored macula, not more than its own diameter above the fovea; then, turning downward, it descended vertically to join the lower temporal vein about two disk diameters below the macula. Two branches—small indeed, but larger than are usually seen in the macular region—joined the vein just before and just after it crossed the maroon area, the one nearer the optic disk trenching upon the lower inner border of the macula. No other anomalies were noted. The condition was carefully and repeatedly studied and drawn by Dr. de Schweinitz as well as myself.

It may be added that the hypermetropia proved to be + 0.9 D. without measurable astigmatism, and that with the appropriate glass the patient has done excellently. There is no subjective recognition of

¹ Archives of Ophthalmology, xi. p. 476, 1882.

² Trans. of the Ophth. Society of the United Kingdom, iv. p. 156, 1884.

the vessel except by entoptic methods; then the large, dark band is seen immediately below the fixation point, in total contrast to the usual picture of the delicate network seen in the right eye. Of her family, the father is myopic, the rest slightly hypermetropic; none show any similar anomaly.

Some five years ago, when I began to study the macula as an essential part of the ophthalmoscopic examination in every case, I saw a child whose left macula was crossed by a small vessel (a vein, if I recollect aright) which was touched by the tiny reflex of the fovea, and seemed actually to dip into its depression. I never saw the case again, and had no one by to confirm the observation—which was made in the haste of full dispensary work and not recorded at the time. Much doubt must, therefore, attach itself to the case; but I can so vividly recall the appearance that it is difficult for me to discredit my recollection of it, and I venture to note it here.

HOSPITAL NOTES.

THE TREATMENT OF PNEUMONIA IN THE PHILADELPHIA HOSPITALS.

HOSPITAL OF THE UNIVERSITY OF PENNSYLVANIA.

DR. PEPPER reduces the initial high fever in cases of pneumonia in his wards (if, as unfortunately rarely happens, the case has been admitted just after the onset) by antipyrin or by the external use of cold water. It was for this, accompanied with severe pain, that venesection was formerly used; and he still advises its use at this earliest stage if high fever returns promptly after reduction by the above remedies. They will often produce a favorable impression, however, with less risk. Throughout the disease the fever must be carefully watched and often requires to be promptly reduced. Sometimes large doses of quinia—as thirty or forty grains given in two doses at intervals of four hours—will do this; but antipyrin or thallin or antifebrin is so much more prompt and certain that he prefers using one of them, and especially antipyrin, for the occasional control of hyperpyrexia, while giving continuously a moderate amount of quinia, say ten or twelve grains daily. Quinia meets several indications in pneumonia, and he nearly always gives it, adapting the dose to the grade of disease and special conditions of the patient. As the stomach must be very carefully guarded in pneumonia and everything avoided that might irritate it, it is often better to give quinia by the rectum.

He is more in the habit of using aconite than veratrum, but one or the other of these powerful and reliable arterial sedatives should be used during the early days of the attack, given in frequent and moderate doses so as to produce safely their physiological effect by lowering the pulse rate, relaxing the system and aiding in reduction of fever. Later, if the pulse loses force or after the area of the disease has become defined, the indication for arterial sedatives has usually passed.

Not only must care be taken to avoid irritation of the stomach, but in many cases especially in the early stage there is much gastro-hepatic congestion and irritation present, and here it is important to limit ourselves to relieving this by short courses of small doses of calomel

with or without soda, using meanwhile quinia by the rectum to control fever. It is especially in these cases that aconite is preferable to veratrum on account of its less tendency to irritate the stomach. After the disease is developed, ammonium carbonate is preferred to stimulate respiration and favor resolution. It is usually given in single emulsion and in doses of five grains every two or three hours for an adult.

The diet must be adapted carefully to the state of the stomach. It should be liquid throughout and for the first two or three days should be very restricted, but after that may be more free and concentrated if well received. It is extremely important that the patient be not allowed to make any exertion. Rigid rest must, indeed, be insisted upon, for pneumonia is one of the diseases in which sudden death is apt to occur from any improper effort, as even of rising to sit upon a commode by the bedside.

The indications for alcoholic stimulants are drawn from the state of the circulation and nervous system. Many cases do well without any stimulus from beginning to end; but on the other hand the signs of cardiac failure or of failure of nervous force call for alcohol, which may be required to be given freely. Of course, it is to be adapted, as to amount and mode of administration, to the state of the stomach. In general a layer of cotton or wool batting stitched inside of the merino undershirt, over the outside of which a layer of oiled silk is placed, is preferable to poultices. The latter must be made skilfully to be pleasant; they must be changed frequently, and unless this changing is done with great care there are both fatigue and risk involved. Of course, the above remarks apply solely to croupous pneumonia.

DR. OSLER in hospital practice recognizes two groups of pneumonic patients—the alcoholic and the temperate. A majority of the former die in spite of all treatment; a majority of the latter get well with any, or with no, treatment. That the mortality from pneumonia in the large, general hospitals is uniformly above twenty-five per cent. is due to the fact that to them are admitted the debilitated paupers of the community with systems undermined by exposure and drink, and in no state to combat an acute disease. Alcoholics with renal inadequacy rarely survive pneumonia.

When the disease is limited, the fever moderate, and the pulse good, a dilute acid mixture is given with Dover's powder to allay the pain and the cough. Cotton wadding, or, if the patient prefer, light poultices are applied to the affected side. Blisters are never used.

As the disease can neither be cut short nor essentially modified by any remedies we at present possess, in severe cases we have to watch and meet the tendencies to death.

First. Heart failure from engorgement of the right chambers, and the lesser circulation, indicated by cyanosis and urgent dyspnoea. Free venesection can alone meet this danger, and should be performed on the first signs of cyanosis, with failing heart. Good results have followed the removal of from eighteen to twenty-five ounces of blood. It is often left too late, and to be efficacious should be done early. It is not always successful. Two cases bled this session died.

Second. The fever, against which quinine, antipyrin,

and antifebrin are employed; but the action of antipyretics in pneumonia is more uncertain than in other acute fevers. Cold sponging and the cold pack are more effectual when the temperature becomes dangerously high.

Third. The increasing debility, systemic as well as cardiac, demands stimulation and careful feeding. A majority of the fatal cases die of progressive heart failure, against which alcohol is given freely. Digitalis is also employed, but the full tonic action of this medicine is rarely seen in the weak heart of fever. Camphor and strychnine are useful in this condition.

Of medicines, carbonate of ammonium is freely given. Opium is used to allay the early pain and to quiet the cough. Extensive bronchitis with liquid expectoration is a contraindication. Arterial sedatives are not much employed, but when the cases are seen early, aconite is sometimes given. In the mild cases they are not often needed, while in the more severe ones they may be positively injurious. Expectorants are rarely called for, and when used the ammonia and nuxvomica fulfil the indications. A milk diet is given, varied as occasion arises.

JEFFERSON MEDICAL COLLEGE HOSPITAL.

DR. BARTHOLOW observes that the treatment of pneumonia (acute croupous pneumonia) must be adapted to the varying conditions of its several stages. The therapeutical stages may thus be—congestion, exudation, crisis or lysis, resolution. When the proper period for crisis or lysis passes without the occurrence of the phenomena indicating it, only two terminations can be expected—subacute or chronic pneumonia; death.

At the onset, when the chill occurs, he gives a full dose of quinine (15 to 20 grains) and morphine (half a grain). He does not claim that this may abort the disease, although he believes it does sometimes effect this, but that it certainly does limit the extent of the congestion then taking place. During the stage of congestion and commencing exudation he employs two remedies chiefly: aconite and opium. Of the former, two drops of the officinal tincture; and of the latter, ten drops of the deodorized tincture, are given every two or three hours; double these amounts being administered at the first dose. When exudation has occurred, for the aconite ammonia is substituted. He prefers the carbonate dissolved in the liquor ammonii acetatis, ten grains to the ounce, of which a tablespoonful every three hours is given.

During the first and second stages, should there be wakefulness or delirium, or the temperature continue high (at 105° or 106° F.), Dr. Bartholow prescribes chloral in fifteen grain doses, three or four times in the twenty-four hours. Indeed, he has found that cases do better with than without chloral, and this, probably, because chloral has a solvent effect on fibrin and fibrinous exudation. As it, also, lessens body-heat, and quiets restlessness, which is only less exhausting than delirium, it becomes directly useful as a remedy for these important elements of the morbid complexus.

As the crisis occurs, or the lysis begins somewhere from the fifth to the eleventh day, attempts at resolution that might otherwise prove abortive, may be changed into a well-defined crisis by the timely administration of

quinine or alcohol in an efficient dose. The indication for the use of one or the other of these remedies, consists in the appearance of some one of the critical phenomena, without the concurrent presence of the others. A copious sweat, an attack of diarrhoea, the sudden return of the chlorides to the urine, the appearance of herpes on the lips, etc., are, of course, the usual objective evidences of the crisis. In the more serious cases, one of these signs may appear, and yet the attempt at resolution fail. It is then that the vital forces need the aid of one or both of these remedies to accomplish the revolution in the pathological process; then quinine, if the dominating factor is elevated temperature; or alcohol, should the cardiac energy appear insufficient; or both, if these conditions are combined.

The persistent use of quinine or of alcohol, according to Dr. Bartholow, is not to be commended. Quinine increases the digestive weakness, and alcohol, in any considerable quantity embarrasses the circulation and impairs the oxygenation of the blood. Nevertheless, alcohol has a distinctive place in the treatment of alcoholic pneumonia. The pulmonary inflammation is often masked by the delirium tremens which is excited by the sudden withdrawal of the accustomed stimulus, and the failure of the nutrition; and, hence, under these circumstances, the alcoholic food must be freely supplied.

As regards counter-irritation, he is clear that only a mild irritation is proper; for whilst this, by a reflex action, stimulates the vasomotor system, and thus lessens congestion, severe counter-irritation, on the other hand, depresses the trophic system and hinders rather than promotes nutrition and repair. A succession of mustard plasters, each applied only long enough to redden the skin slightly, is the best form of counter-irritant. Stupes of turpentine are cumbersome, oppressive, and disagreeable, and blisters are unsuitable, unless applied long enough merely to act as a rubefacient. The counter-irritant or rubefacient cone now made for topical applications, is a very convenient, even elegant, preparation for this purpose.

Venesection continues to be a *vexata questio*. In the old antiphlogistic days, bleeding was so completely overdone, that any merit it has was overwhelmed in the general condemnation. There are, however, two conditions of the circulation in pneumonia, in which a timely bloodletting is of great value: at the outset in a vigorous subject, when congestion is increasing in depth and extent; and at the approach of the crisis, when the heart labors in consequence of overfulness of the veins, and ischæmia of the arteries.

The necessity for close attention to the state of the nutritive functions is distinctly recognized. As the gastric juice in cases of pneumonia is deficient in the constituents required for the formation of peptones, Dr. Bartholow is careful to supply them with the aliment.

THE PENNSYLVANIA HOSPITAL.

In the treatment of acute pneumonia, DR. A. V. MEIGS ordinarily pursues a certain plan which is modified according to the needs of each particular case. The patient is confined rigidly to bed, and, if advanced in years, it is important even that the bed-pan and urinal be used. Food is administered at regular intervals, and

if the case be one of severity it should be liquid, and is best given every two or four hours. In severe attacks milk and beef-tea are given alternately every two hours, three or four ounces at a time. Medicines are given on a plan corresponding with the system upon which nourishment is administered, and usually are taken a quarter of an hour after food; thus the longest possible period of undisturbed rest is afforded the patient. A careful attention to details certainly in the long run conduces much to the recovery of patients. No stimulant is given in mild cases, particularly in young persons, so long as they progress with seeming safety. In severe attacks the patient is freely stimulated, from two to twelve ounces of whiskey, or in rare instances even more, being given in twenty-four hours. It is best given in the milk. Ordinary medicinal treatment is the administration in pill form every four hours of digitalis, gr. $\frac{1}{2}$; opium, gr. $\frac{1}{4}$; and quinine, gr. j. In severe attacks this is suspended and ammonia substituted, or the two are given in conjunction. The most reliable form of ammonia is the carbonate, of which five grains are given every two to four hours, according to circumstances, or there may be administered at the same interval a drachm of the aromatic spirit, or half an ounce of the solution of the acetate.

As yet it has not been his fortune to meet with a case in which he has thought it advisable to bleed, although he believes it to be good practice, if done judiciously in the early stage.

The application of dry cups is a measure often attended with great relief of the suffering, and benefit to the patient, in the early stage of the disease, particularly if the attack is complicated, as is very commonly the case, with much pleuritic pain. From eight to twenty cups are usually applied.

With regard to external applications, he uses no poultices, which are difficult to keep in place, and once begun are hard to get rid of, and become exceedingly troublesome when the sweating stage comes on. Sometimes he has cotton or wool, preferably the latter, sewed upon the inner surface of the shirt.

This is not the place to dilate upon the utter inadequacy of any known treatment to avert the fatal result in some of the more sudden and violent forms of the disease. A careful and patient pursuance of the plan detailed has proved more satisfactory in Dr. Meigs's hands than any other in the management of such cases as have been in his charge in the Pennsylvania Hospital, if they seemed amenable to any treatment.

PHILADELPHIA HOSPITAL.

DR. TYSON recognizes that in the class of patients admitted to this hospital the sthenic form of pneumonia requiring vigorous antiphlogistic measures is rarely seen. He rarely, therefore, practises general bloodletting, but wet-cupping over the affected lung is frequently resorted to. The cupping is followed by jacket poultices, which are continued until the case terminates favorably or unfavorably. Blistering over a liberal area is sometimes substituted for the cupping.

The antipyretic measures used are either digitalis and quinine in full doses, or quinine and the fluid extract of veratria, the latter in five drop doses every two hours, until the pulse is decidedly reduced. Digitalis is used

in cases where debility is conspicuous, and requires to be combated. It is given in doses of fifteen drops of tincture, or two fluidrachms of the infusion every three hours.

From the onset stimulants are freely used, and half-ounce doses of whiskey are given every two hours, or hourly; while it is not unusual to give an ounce of whiskey every hour. It is generally given in the form of milk punches.

Stimulant expectorants are given only when the exudate begins to soften, as indicated by the *crepitans redur*, and cough tending to become loose. Carbonate of ammonium is generally used in doses of from five to ten grains. In cases requiring less stimulation, the ammonium chloride is prescribed in fifteen grain doses. An old practice of the hospital was to give the official liquor potassæ as an expectorant, with the idea that it "thinned" the viscid secretions. There is reason to believe that potassium carbonate has a similar effect.

DR. J. C. WILSON treats his cases of lobar pneumonia in the wards of this hospital symptomatically. The patients, who are drawn from the pauper class or those closely bordering upon it, are not often young, almost always debilitated by destitution or previous disease, frequently the subjects of chronic alcoholism. A considerable proportion of them are admitted at the close of a more or less prolonged debauch. Very few cases of primary pneumonia develop in the wards. The patients are commonly received in the first week of the disease, but very rarely so early as the first day. Neither general nor local bloodletting is practised. The plan usually pursued is as follows:

The patient is bathed and put to bed. If there be no reason to depart from the rule, a mild mercurial purge is at once administered. In case of diarrhoea, great exhaustion, or at an advanced period of the disease, it is omitted. A small dose of opium or a hypodermatic injection of morphine follows after a time, and is repeated occasionally during the attack as may be required to control pain or induce quietude and sleep. After the bowels have been relieved a single large dose of quinine, rarely less than xvj or more than xx grains, is given. From this time until deservescence quinine is not again used except in response to some well-defined indication such as excessive pyrexia. Ammonium carbonate in v grain, less frequently vijss, or x grain doses, is given every second hour, in many cases, throughout the attack. Alcohol is freely used, the frequency and amount of the dose being regulated by its effect upon the heart and nervous system, the total quantity in twenty-four hours seldom exceeding twelve fluidounces of whiskey. In favorable cases with moderate fever and especially in the absence of a previous history of addiction to drink, it is used sparingly. Nevertheless all the cases receive a certain amount of alcohol. Pyrexia, when moderate, demands no special therapeutic measures; when intense, it is treated by ice-poultices to the chest, cold compresses, the cold pack, antipyrin, or large doses of quinine. Digitalis, veratrum, belladonna, and aconite are very seldom used and then only to fulfil special therapeutic indications. Pilocarpine is not regarded as curative. The diet is light, bland, nutritious, and of moderate amount. Turpentine stupes are repeatedly applied, sinapisms occa-

sionally, blisters never, save in cases of delayed resolution. Poultices are only exceptionally employed, a light jacket lined with cotton batting or fine carded wool being found more comfortable, more convenient, and fully as useful.

Upon the occurrence of defervescence alcohol is rapidly decreased in amount, the diet increased, solid food added, and quinine in smaller doses administered. It is usually advantageous to give iron or arsenic for a time. Flying blisters, or the external use of iodine and small doses of potassium iodide may be useful in delayed resolution. Convalescent patients are not kept long in bed, but are encouraged to sit up and move about as soon after complete defervescence as their strength will permit.

Despite the greatest care in the management of this disease in the Philadelphia Hospital, the death-rate, owing to the character of the patients, is high.

MEDICAL PROGRESS.

ANTISEPTIC OBSTETRICS IN THE BOSTON LYING-IN HOSPITAL.—The following is the routine practice described by Dr. Richardson, of Boston, in an article in the *Boston Medical and Surgical Journal* of January 27, 1887.

On her admission to the hospital, if time allows, the patient is given a bath. In every case the genitals and the surrounding parts are washed with a solution of the bichloride of mercury (1:3000). A basin containing the same solution and a nail-brush is placed on a stand side of the bed. The physician and nurse in attendance disinfect their hands every time they have occasion to examine the patient or touch the neighborhood of the vulva. The examining finger is smeared with an ointment made of one part of the oil of eucalyptus and seven parts of vaseline. A vaginal injection of the corrosive sublimate solution is given at the beginning of labor, and this is repeated, when circumstances permit, at the end of the first stage. As the head distends the perineum and is expelled, the parts are kept clean, when occasion requires, by the use of charpie dipped in the mercurial solution. After the birth of the child no undue haste is made to bring about the expulsion of the placenta. This is effected, if possible, by Credé's method of expression, great care being taken not to introduce the hand within the vulva, if such a procedure can be avoided. The perineum is carefully examined, and if there is sufficient laceration to require sutures the parts are washed with the corrosive sublimate solution, after which the edges are brought together by means of carbolyzed catgut sutures, some powdered iodoform being subsequently applied over the seat of the laceration. The vaginal injection is repeated, and the antiseptic pad is applied, being pinned at the four corners to the abdominal binder by means of safety-pins.

During the convalescence the pad is changed as often as occasion requires, the nurse taking care to disinfect her hands thoroughly before removing the pad. Each time the pad is changed, the parts around the vulva are sprayed with the mercurial solution by means of a hard-rubber sprinkler, made by the Davidson Rubber Company to fit their syringes, which are the ones used in

the hospital. It is usually necessary to change the pad during the convalescence about as frequently as it was formerly necessary to change the napkins which the patient wore before the pad was introduced. If it is necessary to use a catheter to empty the bladder, that instrument is, of course, to be disinfected, as well as the hands of the person using it. Care is also taken, before introducing the catheter, to wash the parts in the neighborhood of the meatus with the disinfectant, in order to avoid the introduction of blood, vaginal or uterine discharges within the urethra.

The use of the antiseptic pad is continued until the patient sit up, or until all danger of septic infection has passed. Whenever the mother has given birth to a putrid child or a partially decomposed placenta, an intrauterine injection of the corrosive sublimate of the same strength is given at the close of the labor, in addition to the vaginal one already alluded to. Should it be deemed advisable to give an intrauterine injection, it is safer, after washing out the uterine cavity with the mercurial solution, then, without removing the nozzle of the syringe, to inject a few ounces of a solution of carbolic acid (1:40) of the same temperature (112°). By this method any danger of mercurial poisoning (which sometimes, though rarely, follows the use of corrosive sublimate as an intrauterine injection) is avoided.

In case it is found necessary to use instruments during the delivery, care is taken to disinfect them by means of a solution of carbolic acid (1:40). The same solution is used for the needles, needle-holder, etc., which may be required for sewing up any perineal laceration. Carbolic acid is used in these cases, in preference to the bichloride of mercury, on account of the corrosive action of the latter on the instruments. If, for any reason, it is necessary to introduce the hand within the uterine cavity, great care is taken thoroughly to disinfect the arm as well as the hand of the operator.

The antiseptic pad is made as follows: A strip of Canton flannel (19 by 4½ inches) is placed upon a table, with the soft side uppermost. On the centre of this is laid a piece of carbolyzed cotton (11 by 4½ inches), about half an inch in thickness when not compressed. Over the centre of this is a piece of oiled muslin (9 by 4 inches). On this is placed the pad itself, which is made of what is known as absorbent scrap or waste done up in cheese-cloth, and of a size sufficient to cover the oiled muslin, and about half an inch in thickness, before it is wet or compressed. This pad, before using is dipped in a solution of corrosive sublimate (1:3000) and dried. Whenever a pad, with its binder, is removed and a fresh one substituted, the old pad, including the Canton flannel, oiled muslin, etc., is burnt up.

Since the fall of 1885 the above has been the method in which antiseptics have been used in the hospital. The results have demonstrated, beyond the possibility of a doubt, the great value of such prophylaxis."

THE PREPARATION OF SOLUTIONS OF CORROSIVE SUBLIMATE.—ANGERER, of Munich, has observed following the use of undistilled water in dissolving corrosive sublimate, an insoluble precipitate which Fürbringer has shown to be different oxides of mercury produced by the alkaline carbonates of the water.

In the Surgical Policlinic of Munich, Fürbringer's analyses were repeated, and it was found that light,

warmth, and the presence of air greatly influenced the precipitation, and that with the city water of Munich a precipitation to an amount of 50 per cent. of the mercurial used occurred.

The higher the grade of hardness of the water the greater the separation of the mercurial. Fürbringer states that the addition of salicylic, hydrochloric, or acetic acid, 15 m. to 8 m. to the quart, hindered this separation, and the Munich experiments showed that the addition of 15 grains of sodium chloride to 15 grains of corrosive sublimate resulted in a permanently clear solution.

The interesting question arose, however, as to whether the addition of the salt did not result in other mercurial combinations of less antiseptic value: experiments were made upon this point, and the following conclusions reached: Solutions of sublimate alone and of sublimate with salt, each 1 to 50,000 in strength, were tested, as in weak solutions differences are most apparent.

Sterilized silk was thoroughly impregnated with anthrax bacilli, and a portion of the silk was allowed to remain ten minutes in a solution of sublimate alone, while another portion remained ten minutes in a solution of mercurial and salt: both of the solutions were 1 to 50,000. The silk was then washed with alcohol and sterilized water, and transferred to five test specimens of sterilized agar-agar. These proof-specimens were kept in a culture-oven for six days at a temperature of 36° C. without the development of bacilli.

An immersion of five minutes in the solutions resulted in the presence of bacilli in four out of five specimens placed in sublimate alone, and in three out of five placed in the mixed solution. It is evident, then, that the combination of the mercurial and the salt is equally efficient and more soluble than the mercurial alone.

Angerer has ordered made compressed tablets of sodium chloride and corrosive sublimate, eight grains of each, which he finds efficient in preparing solutions.—*Centralblatt für Chirurgie*, Feb. 12, 1887.

[The above suggests at once Sir Joseph Lister's combination of ammonium chloride and corrosive sublimate in his Sal Alembroth (*MEDICAL NEWS*, July 3, 1886, p. 27): the points of interest being the substitution of so obtainable a substance as sodium chloride for ammonium chloride, and the sterilizing effect of such weak solutions.]

PRESERVATION OF RUBBER APPARATUS.—An inquiry has been carried out under the direction of the French Minister of War, with the object of ascertaining the cause and the remedy for the peculiar changes which articles made of India-rubber undergo when kept in stock, the annual loss to the government from deterioration of this class of goods being very considerable. Experience shows that India-rubber, after a time, loses the very qualities which made it useful, for it becomes dry and brittle. Articles kept in boxes, such as Higginson's syringes, Esmarch's bandages and drainage tubes, are particularly liable to deteriorate. Unfortunately, the commissioners, after a long and patient investigation, are not able to suggest much more than could have been recommended before. They advise, for instance, that Esmarch's bandages should be taken out of the boxes at least once a month, unrolled and manipulated. Drainage tubes should be hung up in a

cool place, or soaked in a non-putrescible fluid. Finally, all objects made of rubber should be kept in a cool, damp place at a constant temperature, and sheltered from light, heat, and frost. Seeing that in many cases these conditions cannot be complied with, it is recommended that the bandages should be made of pure leaf rubber in lieu of the elastic tissue usually employed. The purer the rubber, the less readily does it undergo these structural alterations, and the lighter it weighs; its weight is, therefore, a sure guide to its quality. In consequence of these inquiries, the Minister has ordered that, in future, all rubber articles are to be made with pure rubber of the best quality, preferably with the leaf rubber. The quality of the articles will be gauged by their specific gravity in order to insure the purity of the material employed.—*American Druggist*, Feb. 1887.

PURIFICATION OF WATER BY CHEMICALS.—PROF. DOBRALSANÉNE, of St. Petersburg, recommends the following to precipitate the impurities of water:

To 12 quarts of water he adds 7½ grains of perchloride of iron, and 10½ grains of crystalline sodium carbonate; in 45 minutes the water was perfectly pure.—*L'Union Médicale*, January 22, 1887.

POISONING BY HERRING-ROE.—In the *France Médicale* a case is related in which a man was poisoned by eating three hard-roed herrings. The symptoms were a feeling of oppression, vomiting, burning sensation in the cesophagus and stomach, very violent abdominal pains, and dysentery. The attack lasted about forty-eight hours, and could be traced only to the herrings. Cases of this kind are by no means rare. It has long been known that caviare (sturgeon-roe) and the ova of pike, barbel, perch, and other fish, have frequently given rise to symptoms of poisoning in Russia. M. Goertz, a Russian physician, treated three cases of this kind in one family; the patients had eaten hard-roe, while the other members of the family who ate the soft-roe experienced no inconvenience. Dr. Müncheimer, of Munich, in 1875 reported three cases of poisoning after eating barbel-roe. These cases, which were very severe, were treated with ice and tincture of opium and saffron. Prof. Naunyn reported a similar case in Berlin in 1884. Among the numerous cases reported in Russia, herrings appear to have been the cause in only one. According to Huselmann, accidents of this nature, due to caviare of bad quality, are frequent and sometimes fatal among the poorer classes in Russia. It is impossible, according to him, to say exactly what the poisonous element is, and it is useless to hide one's ignorance by attributing all the effects to ptomaines. In these cases, as in poisoning by mussels, oysters, and other fish, the idiosyncrasy of the individual must be taken into account.—*British Medical Journal*, Feb. 12, 1887.

CURE OF ABDOMINAL ANEURISM BY LORETA'S METHOD.—DR. JOHN F. MORSE, of San Francisco, reports in the *Pacific Medical and Surgical Journal*, of February, 1887, a case of abdominal aneurism, whose treatment he describes as follows:

The patient, a man aged thirty-two, denied venereal infection and alcoholic excess.

On the 4th of March, 1886, he was struck violently in the abdomen by a coal bucket, which occasioned him at

the time no serious inconvenience. A week later, however, he began to suffer from vomiting and constipation which were accompanied by intense pain in the back, sides, and abdomen, and he then noticed for the first time a pulsating swelling in the abdomen. He was confined to his bed for one month, and then came under the care of Dr. Morse, who diagnosed abdominal aneurism, and ordered treatment of rest, low diet, and large doses of potassium iodide for three weeks. At the end of this time he left the hospital much improved, and continued his work for three months: during this period the tumor had grown larger, and the pain in the back became so intense that sleep could only be obtained by the use of opiates.

On November 17, 1886, the patient was etherized, and the abdomen cleaned and disinfected. An incision four inches long was made over the tumor through the linea alba. On opening the abdominal cavity the intestines were withdrawn and covered with warm cloths. The aneurism was then exposed and found to be about the size of both fists.

An exploring needle, one millimetre in calibre, was thrust into the sac, when a stream of arterial blood spurted through it. One yard and a half of one-half millimetre silver-plated copper wire was carefully passed through the needle into the aneurism and the needle withdrawn. The slight hemorrhage resulting was readily stopped by touching the small opening with pure carbolic acid and glycerine. After the usual toilet of the abdomen, the abdominal wound was united by means of five deep and four superficial stitches. An antiseptic dressing of carbolic gauze was applied.

After the operation the patient suffered several days from vomiting, but his temperature never rose above 101° F.

The day following the operation the pulsation in both femorals was scarcely perceptible, but soon appeared again.

On the 23d of November, a week after the operation, the dressing was removed for the first time, and the abdominal wound being healed, the stitches were removed. The pulsation over the tumor was very slight.

Nothing of importance transpired until the 26th, when the patient complained of great pain in the left groin, and an examination revealed the left leg enormously swollen, œdematous, and cold, and no pulsation was to be felt in the left femoral. In the right femoral it was very feeble. The left leg was wrapped in cotton and warm bottles applied. In two or three days the swelling had disappeared, the pulsation in the left femoral not reappearing.

In another week all dressings were taken off and the patient continued to improve.

December 13. The pulsation over the aorta is no stronger than over a normal aorta, and auscultation reveals no bruit in the sac, which is extremely hard to the touch. The patient is ordered to remain quietly in bed, on his back, in order that the clot may become firmly consolidated.

17th. Pulsation over tumor scarcely perceptible, no bruit to be heard on auscultation. Patient is in excellent condition and anxious to get up. Wound in abdomen entirely healed. Pulsation in left femoral has not returned, is slight in right femoral.

28th. Patient has been up for a week. Pulsation has

returned in left femoral, slightly increased pulsation over sac. Patient has no pain and is in excellent condition.

January 7, 1887. Patient is about to leave the hospital. Pulsation in tumor again diminished. Tumor reduced one-half in size at the time of operation, consists of a hard nodule. No bruit. Scarcely any difference in pulsation of femorals.

This, the first successful case of the kind, proves the feasibility of Loretta's method of treating aneurisms of the abdominal aorta.

ANTIFEBRIN.—LÉPINE reports his observations on the use of this drug in typhoid, in which he considers it as efficient as double its dose of antipyrin. The time when the temperature will probably reach its highest point should be observed, and eight grains of antifebrin should be given an hour previous to this time. Typhoid patients apparently obtained remissions which influenced the disease favorably by this means. When the temperature fell there was no collapse; the patient felt well; the pulse-rate was slightly increased; the vigor of the heart's action was not lessened, but was often increased. In those very severely ill, cyanosis and lessening of the secretion of urine were observed.

Antifebrin, when given in severe quotidian intermittent, cured the paroxysm promptly without cyanosis. The drug is probably an antiseptic, as all antipyretics act antiseptically against certain microbes. The presence of aniline, set free from antifebrin, would account for the antiseptic action of antifebrin.

As a nervine, the drug quieted the lancinating pains of tabes in one or two doses of eight grains. The patient felt relieved after half an hour without any other apparent effect. It acted well in two cases of neuralgia; in a case of multiple sclerosis the tremors were hindered, and the strength of the patient increased.—*Centralblatt für die gesammte Therapie*, January, 1887.

PRESCRIPTIONS FOR MENORRHAGIA AND METRORRHAGIA.—The *Revue de Thérapeutique* for February 1, 1887, gives the following for severe menorrhagia, as original with DENYAU:

R.—Aquæ dest. 3xv.
Gummi tragacanth.,
Chloroform. pur. aa 3j.
Tinct. cannabis indicæ gt. xxx.—M.
Sig.—Take in two doses.

The following are the prescriptions of HILDEBRANDT and FELLNER for profuse metrorrhagia:

R.—Ext. fl. hydrastis canad.,
Vini malaga,
Syrupi cinnamom. aa 3ijss.—M.
Sig.—One or two teaspoonfuls every two hours.

Berberine or hydrastine, alkaloids of hydrastis, may also be used. FELLNER gives the following:

R.—Berberin. phosphat. gr. xv.
Dissolve in 3v of boiling water.
Add:
Vini malaga,
Syrup. cinnamom. aa 3ijss.
Sig.—Twenty drops every two hours.

Also :

Hydrastin. hydrochlorat. . . . gr. xv.
Dissolve in distilled, boiling water . . . ʒijss.

Add :

Aquæ aurantii floris,
Syrup. tolu vel syrup. menth. piper. . . . ʒā ʒijss.
Take in the same doses as preceding.

ABSORPTION FROM THE MUCOUS MEMBRANE OF THE URINARY BLADDER.—The question as to the occurrence of absorption through the mucous membrane of the urinary bladder has often been considered both at the bedside and in the laboratory, but the results have hitherto been sufficiently discrepant to leave room for more exact work on the subject. The latest contribution toward a solution of the problem bears the mark of exact, scientific observation, and seems to us largely to settle the matter. In the current number of the *Journal of Anatomy and Physiology* there is a paper on "Absorption from the Mucous Membrane of the Urinary Bladder," by Dr. Herbert H. Ashdown, late senior Demonstrator of Physiology in the University of Edinburgh, in which a critical summary of the work already done is given, and a series of carefully conducted experiments is reported. The observations were made on rabbits and dogs, and consisted essentially in the analysis of results obtained by the intravesical injection by the urethra of substances possessed of known physiological properties or readily estimated chemical reactions. The author divides his experiments into three groups: (1) Those in which the drugs administered have a sufficiently distinct physiological action of their own to indicate their presence when absorbed into the system; (2) those in which the renal elimination of the drugs given can be readily demonstrated; (3) those in which the quantitative analysis of a solution of known chemical composition can be conducted after it has remained for several hours in the bladder. The results of the triple series are strikingly similar, and appear to justify Dr. Ashdown's conclusions. These are: (1) That absorption of a very large series of chemical substances does take place from the mucous membrane of the urinary bladder when in a perfectly healthy condition; (2) that the urinary constituents themselves—those substances eliminated by the kidney, as effete products of the system—are absorbed from the bladder in varying productions, this applying more especially to the water and urea, but also, though to a less extent, to the inorganic solids; (3) that the degree of distention of the bladder plays a most important part in increasing or diminishing the rapidity of such absorption; (4) that regular rhythmical contractions take place in the muscular wall of the bladder; that these contractions are largely influenced by the degree of distention of the bladder, being most marked with a moderate amount of distention of the viscus, and but feebly marked in slightly distended or in over-distended conditions; and that the character of these contractions is largely affected by the nature of the fluid contained in the bladder.—*British Medical Journal*, Feb. 12, 1887.

ANTIPIRYN IN HEMICRANIA.—UNGAR, of Hamburg, was led, from the similarity of action between salicylate of sodium and antipyrin, to give the latter for hemicrania.

From his own observations, and those of his colleagues, he was led to believe that antipyrin is more rapid and certain in its effects than the salicylate. In the beginning of the attack, and in its prodromal stage, the remedy had an abortive effect or made the paroxysms much milder than usual. Patients who were generally obliged to forego their usual occupations, and who could not sit up during the attack, were generally able to go about with comfort. When taken after the inception of the attack, and when it had developed considerable intensity, antipyrin had still a most favorable effect. Among the patients thus benefited were those who had tried all other known remedies without result. Antipyrin, however, will not relieve, in all cases, the distressing symptoms of hemicrania; there are patients with whom it has no effect, and others who are upon one occasion benefited, and who receive no relief in another trial of the remedy; the observer was not able to recognize a ground for discrimination in these cases.

In those cases in which antipyrin acted favorably a dose of fifteen grains, once administered, was generally sufficient; exceptionally, twenty-three grains were given once. Its good effects were usually manifested in one hour after taking, and when this was not the case, the first dose was repeated, and good results rarely failed. It was generally ordered in capsules or wafers. Dangerous or unpleasant effects were not observed after its use.—*Centralblatt für die gesammte Therapie.*, Jan. 1887.

PNEUMOTOMY IN PULMONARY ABSCESS.—DR. RUNEBERG, Professor of Medicine at Helsingfors, in a clinical lecture which has been published in a Swedish journal published in Finland, gives an account of a case of pulmonary abscess consequent on acute pneumonia, where he had performed pneumotomy with success. In addition to this he had collected notes of ten other cases. Leaving aside three of the eleven on account of uncertainty in the diagnosis, five of the remaining eight recovered, or at all events improved very decidedly, and in the rest, which were fatal, death could not in any way be attributed to the operation, so that Dr. Runeberg considers that when the diagnosis of pulmonary abscess is clear, and it is in an accessible situation, the best practice is certainly to open it. He then refers to the question of operating for gangrene of the lung. He himself had had a case of this, together with bronchitis and bronchiectasis; after the operation secondary gangrene and septicaemia occurred, which proved fatal. In seventeen other cases of gangrene he quotes from medical literature where pneumotomy was performed, seven recovered more or less completely, and the fatal termination of the remaining ten did not appear to have been attributable to the surgical interference. As to the method of opening the lung, Dr. Runeberg is in favor of resecting a rib, and then using the thermo-cautery. He does not approve of washing out the cavity with antiseptic lotions, thinking them dangerous, and believing that ample drainage is sufficient. In conclusion, he mentions several pneumotomy cases he had collected: two were for ecchinococcus, both terminating favorably; six were for bronchiectatic cavities with gangrene; and six for tubercular cavities. In the latter two classes of cases, he does not think operative procedures are advisable.—*Lancet*, Feb. 12, 1887.

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ANTISEPTIC OBSTETRICS.

THE question of the hour in regard to obstetric practice relates to the use of antiseptics. Last year two important contributions to the subject were made in this country, one by Kucher, in his volume upon *Puerperal Convalescence and the Diseases of the Puerperal Period*, and the other by Garrigues, upon "Antiseptic Midwifery." If to these there had only been added a translation of the volume of Fritsch upon the treatment of puerperal affections, of which a French edition appeared in 1885, the American profession would have available the three most useful, brief works presenting the importance of using antiseptics in obstetric practice, and the methods of employment advised by eminent obstetricians.

The last utterance upon the subject is by RICHARDSON, in a paper entitled "The Use of Antiseptics in Obstetric Practice," published in the *Boston Medical and Surgical Journal* of January 27. Richardson states, in considering the etiology of puerperal septicæmia, that "to-day it is unquestionably admitted by many leading obstetricians that the infection must come from without." This expression of opinion, however, is not sufficiently strong, he might have distinctly said there is no such disease as autogenetic puerperal fever. Ernst, expressing the view of bacteriologists, is quoted fully in the paper as to the different varieties of bacteria which have been found in puerperal fever, the quotation concluding with the statement: "The problem is unquestionably how to keep these bacteria out of the body. Without their entrance there will be no puerperal fever or septicæmia." These are no ambiguous words, and they plainly and clearly express the truth as at present known; they

remand to the region of past darkness or of only partial light the decayed doctrine of autogenesis. Here is a most useful working hypothesis furnished, and so much even the sceptics must admit, a working hypothesis which in its results has established its probable truth.

Let us see how Richardson keeps omnipresent bacteria out of the puerpera, does not allow them to come in contact with the wounded surfaces, for, as was especially emphasized by Sirédey a few years ago, and as is maintained by most obstetricians to-day, without a wound the infectious agent cannot enter. The parturient patient is given a bath, and the genitals and surrounding parts are washed with a solution of the corrosive chloride, 1 to 3000. Thorough disinfection of the hands is made by the nurse and by the obstetrician, and when the latter makes an examination the fingers are covered with a mixture of oil of eucalyptus and vaseline; an injection of corrosive sublimate is made at the beginning of labor, and at the conclusion of the first stage and after labor is over; tears of the perineum, if requiring it, are stitched with catgut, powdered iodoform being afterward applied, and, finally, the antiseptic pad advised by Garrigues is employed.

Antiseptic injections during labor are clearly indicated, first, if the woman has been suffering from an abundant and offensive leucorrhœa; and, second, when the labor is protracted, particularly if manual or instrumental delivery be required. Otherwise, we would have only one injection used, and that immediately after labor. In this respect we prefer the practice of Fritsch to that of Richardson, and accept as ordinarily true the statement of the former as to all vaginal injections, "there is nothing hurtful in the vagina, and the detersive injections have no object." As to anointing the fingers before making a vaginal examination, it is quite probable, as taught by Fritsch, that this is unnecessary, since the fingers have been just removed from an antiseptic solution, the parts are relaxed, softened, and lubricated by the abundant secretions, and resistance and friction are absent, provided frequent injections, especially such as coagulate the albumen of the secretions, have not been made.

As to the antiseptic pad so warmly endorsed by Richardson, previously enthusiastically advocated by Garrigues, the results which each has had speak warmly in its favor. But if the external sexual organs are thoroughly cleansed twice a day by a warm antiseptic solution, and if aseptic napkins are used, the antiseptic pad may be omitted.

Antiseptic obstetrics makes sure progress, though differences of opinion may be held as to those methods which are most useful and necessary. The day surely comes, if not already here, when puer-

peral fever will no longer be thought by any an accident, and the obstetrician will be as careful to guard against septic infection as he is when he performs abdominal section. If he has failed in these precautions, and has a fatal case of puerperal fever, he can escape neither the reproach of his own conscience nor public censure.

CALOMEL AS A DIURETIC.

SEVERAL writers have recently called attention to the value of calomel in the dropsy of heart disease, and in *L'Union Médicale*, No. 12, 1887, LONGUET gives a *résumé* of the published papers. JENDRÁSSIK of Buda-Pesth, noted a marked diuretic effect from small doses administered to a syphilitic patient with cardiac dropsy; the diuresis was so abundant and apparently so directly a result of the mercury that he employed the remedy in a series of seven cases, and in all with decided benefit. In the first case there was a mitral lesion with oedema of the legs, Cheyne-Stokes breathing, and a very serious general condition. Digitalis and caffeine were no longer effective, and the urine had fallen to 22 oz. in the day. On the second day after the administration of the calomel there was diuresis and the amount of urine increased daily until a maximum of 297 oz. was reached, and as the dropsy disappeared the quantity gradually became normal. Three weeks later, on return of the dropsy with dyspnoea and Cheyne-Stokes respiration, the calomel was again successfully resorted to, and the patient ultimately left the hospital in good condition. From ten to fifteen grains were given daily in divided doses. The effect is not produced if the mercury acts on the bowels, and the diuresis is always preceded by symptoms pointing to the absorption of the medicine, such as the metallic taste, stomatitis, or pyalism.

STILLER, as noted in *THE MEDICAL NEWS* of Feb. 5, reports equally favorable results in fourteen cases, but he gives smaller doses in the day, seven to ten grains. The diuretic action is not often evident until the third or fourth day. Opium may be added to check diarrhoea without interfering with the special effect of the mercury. He considers it a very valuable adjunct to digitalis in the treatment of heart disease.

MENDELSON confirms these results and gives calomel in cases in which the digitalis is inoperative, or in which it has had to be suspended for fear of its cumulative action. He gives three or four grains three times a day, and the diuresis is usually manifest within forty-eight hours, and before there are signs of absorption.

The mode of action is not very clear, but it is not due to any effect upon the heart, as the contractions

are not increased in vigor, nor is the arterial tension raised. It is apparently a direct effect of the mercury on the kidneys. Longuet calls attention to the fact that Stokes recommended calomel in cases of dilatation of the heart with congestion of the lungs and liver, cardiac asthma and dropsy, and noted great diuresis with rapid disappearance of the anasarca. There is certainly clinical evidence of sufficient weight to warrant a full trial of this method at the hands of the profession.

CEPHALIC VERSION IN PRESENTATION OF THE PELVIS.

THE performance of bimanual version has been recognized as inoperative in cases of shoulder presentation. Of late, however, some obstetricians have sought to include all presentations except that of the vertex. Thus we find in the *Nouvelles Archives d'Obstétrique et de Gynécologie*, for January 25th, the report of a recent discussion in the Paris Obstetrical and Gynecological Society as to the propriety of version by external manœuvres, in case of pelvic presentation, substituting for this the head. The discussion was begun by PAJOT, and among the participants were GUÉNIOT, CHARPENTIER, DOLÉRIS, and PORAK.

Pajot believed that this operation should be proscribed, for in the cases in which it is easy it is useless, as the labor would terminate favorably without it; and in the cases in which it would be useful, notably in primiparæ, it is difficult, and sometimes impossible or dangerous. This view was sustained by Guéniot and Charpentier, but, on the other hand, Porak and Dolérès gave only a qualified approval, contending that in some cases external version, by which the head had been made to replace the pelvis, had been successfully done, and that it was wise where possible to attempt this substitution, since the mortality of vertex was less than that of breech presentation.

It seemed to be generally admitted that in multiparæ the danger to the child from a pelvic was scarcely greater than from a vertex presentation, while the difficulty in performing version in the case of the primiparæ was in some cases insuperable. Among the dangers of the attempted operation, one emphasized by Pajot was, that the version might be incomplete, so that the shoulder would take the place of the pelvis, and hence peril come to the mother. Again, it was stated that rupture of the uterus, detachment of the placenta, and an unfavorable puerperium, might result from the operation. But the answer to these possible objections is that none of them has been proved, and until they are established by actual experience, they ought not to deter us from the operation.

The special variety of pelvic presentation which usually causes the most delay and difficulty in labor

is that in which the legs are extended over the chest, the body being rendered inflexible by the rigid limbs, which act as a sort of splint. In such a case the difficulty and danger in version are apparent, and we should be very loath to attempt it, especially if the child was large and the amniotic liquor scanty. Again, the breech may present in a case of narrowed pelvis, a narrowing which is not so great but that a living child may be born by the induction of premature labor; in such a case no attempt would be made to substitute the head, for whatever may be the differences of opinion as to the relative value of the forceps and version in narrowing of the inlet, the induction of premature labor limits the choice to the latter method of delivery.

The question considered by Pajot and his associates can only be settled by large and accurate statistics including cases of pelvic, and those of substituted vertex delivery, giving the foetal and also the maternal mortality. Meantime, in the management of unchanged pelvic presentation, we should remember the wise words of Charpentier: never hurry, carefully observe the pulsations of the foetal heart, let nature do all she can, wait if possible for the spontaneous disengagement of the pelvis and the trunk, and do not intervene until the last minute in order to assist the delivery of the arms and the head.

THE YELLOW FEVER INOCULATION INVESTIGATION.

THE Sundry Civil Appropriation Bill for the fiscal year beginning July 1, 1887, contains a clause providing that the President is authorized to use of an unexpended balance now in the Treasury "a sum not exceeding ten thousand dollars for the purpose of investigating the merits of the methods practised in Mexico and Brazil for preventing yellow fever by inoculation."

It will be seen that the President is not limited in any way as to the persons to be employed or the methods to be used in this investigation. He may detail officers from any Department of the Government service, or he may make special appointments from civil life. It is a matter of great interest to the people of the United States, and to the medical profession in particular, that the person or persons selected to make this investigation shall be thoroughly competent, and fitted by special training for the work which is to be done. In the first place, they should be men who have had yellow fever, and are therefore protected as far as possible against a second attack. In the second place, one of them at least must be thoroughly trained in the latest methods of culture and identification of micro-organisms.

These two requirements point directly to Dr. Sternberg, of the Army, who is the only man in this country that we know of who possesses such a

double qualification. Dr. Sternberg has had yellow fever, is thoroughly familiar with its manifestations, has already investigated it in Havana, and is well known as an accomplished bacteriologist. For these reasons in behalf of the medical profession of the country, we ask that he may be selected for this work and given the necessary assistants and materials.

A part of the investigation must necessarily consist in the careful scrutiny of the evidence that protection has been or can be conferred by such inoculations as those reported by Drs. Freire and Carmona, and this is to a certain extent independent of the question as to whether they have really succeeded in identifying the specific microorganism which produces the disease.

So far as we can now judge, they have not succeeded in doing this, and their inoculations have been made with mixtures of several kinds of bacteria, some of which at all events have the power of producing septic effects. It is, of course, possible that the true yellow fever germ may have been among those inoculated, and it is also possible that some one of the septic bacteria though not the specific cause of yellow fever, may be able to produce a condition of the system which will give immunity, or at least a partial and temporary immunity, against the fever. The investigation of the evidence as to the effects of inoculation must therefore be made whether the specific germ can be identified or not, and this part of the work will require much time, patience, and tact by a man who can speak Spanish well, and is familiar with the subject. Such a man might well be appointed, we think, from civil life, and there are several physicians in the South who possess the requisite qualifications, so that there is more liberty of choice than there is with regard to the bacteriologist. We do not see any special need for more than two persons to conduct this investigation, but the field is certainly too wide for one.

We are very glad that Congress has authorized the inquiry, and look forward with great interest to the results.

THE presidency of the collegiate department of the Long Island College Hospital, Brooklyn, has been accepted by Dr. Joseph C. Hutchison, of that city, that position having recently been made vacant in consequence of the death of Dr. W. H. Dudley, who for many years had been at the head of that institution. The new president was formerly a member of the faculty of the school, and held the chair of surgery at a time when the late Professors Austin Flint and F. H. Hamilton were also identified with the interests of the institution.

THE Pathological Society of Brooklyn was, on February 24th, addressed by Dr. H. B. Baker,

of Lansing, Mich., on the etiology of pneumonia. Dr. Baker was present by special invitation, and was greeted by a large attendance of the members. His lecture developed his views concerning the influence of weather conditions in the causation of pneumonia and other respiratory diseases, illustration by numerous diagrams being a prominent feature. After a full debate of the subject, a hearty vote of thanks was proffered to the lecturer. A resolution was also adopted expressing regret that the Michigan Board of Health appears to be in jeopardy from detrimental legislation, and asking that the said Board be amply sustained, and that funds be given it for the establishment of a biological laboratory.

As viewed from the side of the public, the removal of Major Moses Veale, the Health Officer of Philadelphia, is a most injudicious act on the part of the newly installed Governor of Pennsylvania. Major Veale has administered the affairs of his office with unusual ability, and there can be no reason why the public should be deprived of his valuable services except a compliance with the inexorable demands of the spoils system of political appointment. It is to be hoped, for the sake of the community, that his successor will prove himself capable, and will strive to maintain the efficiency which characterized the administration of the retiring officer.

PROF. LUDWIG BANDL, who was reported to have died, and whose obituary notice has appeared in a number of journals, is said to be still living. He is, however, suffering from melancholia, and his sudden retirement gave credence to the report of his death.

A NEW medical association was organized in Brooklyn, on February 25th, under the title of the Kings County Medical Association, and officers were elected for the ensuing year, as follows:

President, E. R. Squibb, M.D.; *Vice-President*, Avery Segur, M.D.; *Recording Secretary*, R. M. Wyckoff, M.D.; *Corresponding Secretary*, W. G. Russell, M.D.; *Treasurer*, J. R. Vanderveer, M.D. This Society will be in affiliation with the American Medical Association, and it proposes to give especial prominence to the cultivation of social and professional intercourse among its members.

CREMATION in New York has not progressed as rapidly as its promoters had hoped. The experience of last year shows that less than ninety incinerations were performed at the Newtown crematory, whereas the income from not less than one hundred and fifty would be required to defray the annual outlay. The stockholders of the Society owning the crematory will make good the deficiency by an as-

essment. The report of the Society explains that, in addition to the unpopularity of their project due to the religious scruples of various denominations, there has been encountered an unexpected obstacle in the position taken by the health authorities of New York City. The latter body have refused to issue permits for incineration on the ground that the laws of the State provide that all dead human bodies shall be disposed of by interment.

SOCIETY PROCEEDINGS.

NEW YORK SURGICAL SOCIETY.

Stated Meeting, February 8, 1887.

THE PRESIDENT, CHARLES MCBURNEY, M.D.,
IN THE CHAIR.

DR. T. M. MARKOE presented a

CASE OF CIRROID ANEURISM, TREATED BY SIMULTANEOUS LIGATURE OF BOTH OF THE EXTERNAL CAROTIDS,

with the following history: James S., aged twenty, a marine, about five years ago was struck with a club on the left side of the head near the parietal eminence. A small lump remained after the injury, which slowly increased in size, and in the course of two years became a pulsating tumor. He was admitted into the New York Hospital the last of June, 1886, and then presented a large, soft, fluctuating tumor, situated over the left parietal bone, toward which several large and tortuous branches of the temporal artery converged, and into which they manifestly opened. The same condition existed, though to a less degree, on the right side. The occipitals seemed to be but slightly involved. The pulsation was very marked in all parts of this mass of enlarged vessels, notably so in the central enlargement; a thrill was felt on placing the finger upon the vessels, and also a feeble bruit. The entire series of vessels was easily compressible. The patient had no pain, only a sense of discomfort about the head, and when he stooped or made a violent effort, he felt a distressing sense of distention. The same was true if he indulged in drink.

He was very anxious to obtain relief, as the tumor had grown so rapidly as to cover the entire left side of the scalp, and the vessels were beginning to dilate on the opposite side. It was decided to tie both of the external carotids, a procedure warmly advocated by Bruns, of Tübingen, because it seemed as if the circulation through the scalp could thus be controlled most effectually. The operation was performed on July 9th, and the dressings were not disturbed until the 27th, when it was found that the wounds had healed perfectly except at one small point, which was well in a few days. It was found at the time of the operation that the central mass consisted of a large ampulla, with which several dilated arteries communicated. The pulsation ceased after the operation and the dilated vessels gradually disappeared; but the ampulla still remains, although it no longer pulsates. Although the cure in this case is not perfect, ligation of the carotids seems to give the best results. Extirpation of the tumor is another alternative,

but it is limited to cases in which the mass is circumscribed. It is sometimes successful, but often fatal.

In reply to a question from Dr. Wyeth, he said that the carotids were tied below the lingual arteries so as to control the circulation through the occipitals. There were very few cases in which any operation had been perfectly successful, except those in which extirpation could be accomplished. He recalled an instance in which the late Professor Van Buren had tied in succession every artery that entered the tumor without producing any visible effect upon it. If employed in any early stage of the disease this operation of ligature of both external carotids promises much.

DR. WYETH said that this was the first case that he had seen in which both carotids were tied to cure cirroid aneurism. Up to within twelve years the external carotid had only been tied about sixty-seven times, but since then the operation has been performed very often, and there has been, so far as he has noticed in the journals, no dangerous secondary hemorrhage in any instance where animal ligatures had been used. The speaker said that he had tied the external carotid five times below the origin of the lingual (on both sides in one instance), and even at the very point of bifurcation.

DR. STIMSON said that there still seemed to be marked pulsation in the vessels; might it not increase?

DR. MARKOE replied that the pulsation was certainly diminishing; it was possible now, he added, either to inject some coagulating fluid, or to excise the entire mass, if it seemed desirable.

DR. STIMSON remarked that in the successful cases which had been reported, the central cavity itself was destroyed; tying the arteries is only a preliminary step in the operation, which alone is rarely sufficient to effect a complete cure.

THE PRESIDENT doubted if it was possible to effect a radical cure of cirroid aneurisms without encircling the entire tumor. He had produced some benefit by tying the main artery, but the pulsation eventually returned. His last case was one of large pulsating orbital tumor, to cure which he ligated the common carotid artery, when the pulsation nearly disappeared, but gradually recurred. He then dissected out the tumor entire; fifty vessels requiring ligature in spite of the fact that the main artery had previously been tied. When the patient was last seen the pulsation had stopped.

DR. WYETH referred to a case of Mussey's, in which he tied both common carotids, and was even then obliged to dissect out the tumor.

ABSCESS OF THE HEAD OF THE TIBIA; RESECTION OF THE KNEE.

DR. POORE presented a girl, eleven years of age, who had always had some trouble in her knee. About eighteen months before, it became flexed and ankylosed. Last October he excised the joint, and found an abscess in the head of the tibia above the epiphyseal cartilage; this was thoroughly scraped out and drained. The patient recovered rapidly, the wound healing under two dressings. There was slight motion; about one inch shortening. The patella was removed.

In reply to a question from Dr. Markoe, he said that he had never seen cases in which the ligamentous union yielded after a time. After scraping out the abscess-cavity he introduced a drainage tube through the bone.

He had drained several joints in this way, and believed that a good deal of bone was thus saved.

DR. LANGE announced that a patient upon whom he had performed the

NEW OPERATION FOR PROLAPSUS ANI,

was unable to be present. He presented a patient from whom he had removed a

SARCOMA OF THE RECTUM

by drawing down the gut and excising it. He had attempted to form a constriction by uniting the muscles in the manner described at the former meeting. The patient had perfect control over her sphincter when her bowels were somewhat constipated, but not when they were loose. She was obliged to wear a napkin, but seldom soiled it.

DR. STIMSON examined the patient at Dr. Lange's request, and stated that he found an orifice admitting the index-finger as far as the second joint; beyond this point there was a firm, cicatricial mass, which it was impossible to pass. When the patient was told to contract her muscles, the contraction of the levatores ani could readily be felt.

DR. WEIR then read a paper entitled

FOUR MONTHS' OPERATIVE WORK AT THE NEW YORK HOSPITAL,

of which the following is an abstract; sundry cases having been of necessity omitted.

From October 7, 1886, to the present time, he has had in his ward 339 patients of all kinds, and 105 operations, a large number of which were of importance. Of these there were 19 done on the head and neck, 53 on the trunk, of which 23 were in the genito-urinary apparatus, and 33 on the extremities. This is a division, which, while not strictly scientific, allows of ready grouping of cases, and on this account is adopted.

The operations on the head and neck were principally the following: Two for the relief of *deformity of the nose*. The points of each are worth a brief mention.

INJURIES OF THE NOSE.

C. F. P., aged nineteen, was admitted January 4, 1887, with the statement that fifteen years previously he fell a distance of seven feet, striking his nose, flattening it by apparently crushing in the cartilaginous septum. The nose is now increased in breadth at the lower part and sunken in, and the nasal process of the maxillary bone is unduly prominent. The septum is much thickened for half an inch below the skin, but not deviated. On January 7th, with a fine wood-engraver's chisel, Dr. Weir cut through from without the superior maxillary processes, and forced them inward and toward each other, and held them *in situ* by a needle passed transversely across the nose, the ends of which were prevented from pressing against the skin by pads of iodoform gauze. At the tip of the nose, from within the nares, the thick skin was separated for a considerable distance upward by subcutaneous dissection from the cartilage, and pulled forward, and held by a silver wire clamped at each end with a shot over a little cork plate, so that the broad, flattened under surface of the skin could be brought together.

The upper pin was removed on the fourth day, as some sloughing from pressure was apprehended; this immedi-

ately ceased. The lower wire was kept in for twenty-four hours longer; no ulceration had taken place under the cork pads. Lateral compresses were kept on for a few days longer. The result was excellent and the patient was submitted for inspection.

The second case consisted in replacing the parts lost by the end of the nose being bitten off in a fight. A portion of the tip and of the ala had been removed so that the nostril was carried upward. This is best shown in the accompanying illustration, in which the



outlines of the flaps made for closing the defect are also seen. The curved flap of skin was severed from its attachments up to just below the inner angle of the eye and drawn downward and fastened by black silk sutures, and the ala separated except at its lower portion and tilted forward and downward. The result was fully satisfactory, though the utilization of a portion of the columna to fill up a slight gap in the edge of the nostril was subsequently necessary.

Beside these external nasal operations, there were two others of more importance, one being

A PECULIAR BONY TUMOR OF THE NOSE,

met with in a young woman of twenty-two, who had had since her tenth year difficulty in breathing through the right nostril. This had lately increased and had been associated with hemicrania of that side. At the orifice of the nostril was seen a fleshy mass which covered a bony resistant mass. Nothing could be passed alongside it. Although no swelling of the cheek existed, it was determined at the operation, after the exposure of the bone by the usual incision from the middle of the lip around the nose, to open the antrum to see if the growth invaded that cavity. This was done with a small gouge; it proved to be free from disease. The bony growth, which apparently consisted of a greatly developed inferior turbinated bone, was removed with forceps, and the operation supposed completed; but it was noticed that the blood collecting in the nose did not run down the throat, and this was found to be due to the posterior portion of the bone shutting off the posterior nares and permitting only a fine probe to be carried into

the naso-pharynx. This part of the bone was thereupon removed, when the passage was found to be quite clear. The patient has since been free from all unpleasant symptoms, except from the annoyance of a collection of muco-purulent crusts.

AN INTRABUCCAL DIVISION OF THE INFERIOR MAXILLARY NERVE

was done for a severe neuralgia affecting the right side of the face, but principally the lower teeth, with flashes of pain along the course of the auriculo-temporal nerve. An incision in the mouth was made from the upper to the lower jaw, along the inner edge of the latter. The spine of Spix was exposed, and after being seized with slender but strong forceps just before it enters the dental canal, the nerve was divided by scissors above and below the bite of the forceps. The little scrap removed, however, did not plainly show nerve tissue, so, after several endeavors, a short-curved blunt hook was introduced two or three times, until finally it was passed well back and drawn forward, with a seizure of what was supposed to be nerve. This was divided with scissors, when quite a severe hemorrhage took place, only controlled by rapidly packing the wound with iodoform gauze. The hemorrhage recurred the same evening to the extent of several ounces more, and was checked by a further compress and by binding the jaws tightly together, which forced the compress more firmly against the wound. The gauze was removed piecemeal from the wound, the last being taken away by the tenth day. The patient has been, when last heard from, four months from the time of the operation, entirely free from pain and has gained greatly in flesh.

Whether the hemorrhage came from the inferior dental, as he feared at first, or from the internal maxillary, he could not positively determine, but as he had heard of a similar mishap in an operation much more simply conducted than this, he had been led to think it was from the former vessel. He has performed the operation now three times. In the first case it was readily completed with the removal of a small portion in the grasp of the slender forceps used, and the success was permanent. In the second a good deal of difficulty was met with, until the nerve was finally divided; pain recurred after three months interval.

Of the surgery of the brain, two interesting examples can be given; the first of which is one of

CEREBRAL ABSCESS FOLLOWING AN OLD INJURY.

Patient received an injury of the left frontal region just above the eyebrow, in 1880, by his gun exploding and lodging its breech-pin in his brain. When extracted, at this hospital, the anterior clinoid process of that side could be felt by the finger. A number of bone fragments were removed with some brain substance. No cerebral symptoms followed until four months later, when infrequent epileptic fits showed themselves, but none have occurred during the last two years. He had, last summer, a painful pulsating swelling over the site of the old injury, which passed away under large doses of iodide of potassium and by local blistering. About ten days ago he began to have much pain and headache on the left side of the head over the brow. When sent to the hospital by Dr. Seguin, November 7, 1886, there

was some œdema of the left upper lid and great sensitiveness over the region of the old cicatrix, and a sense of deep fluctuation was also to be felt; no paralysis of motion or sensation. A V-shaped incision, raising the old scar, was made under ether until an opening in the skull the size of the thumb nail was reached; this was filled with a dense membrane which visibly pulsed. A puncture with a hypodermatic needle revealed pus, and the membrane was accordingly incised and nearly two teaspoonfuls of pus evacuated. The cavity of this abscess reached nearly an inch beyond the skull level. It was at first thought that it might be the original frontal sinus, but its depth and the plainly seen pulsation showed it to be the cranial cavity, though shut off from the brain by a thick layer of old inflammatory material. It was dressed from the bottom with iodoform gauze. During the evacuation of the pus respiration wholly ceased, and only by artificial respiration, lowered head, and whiskey hypodermatically, could it be started again. It was a query whether this was due to the ether or brain interference, or both. This has been noticed by others in abscess of the brain. (See Nancrede, *American Surgical Association Reports*, vol. ii.)

The second case was an unsuccessful attempt at

REMOVAL OF A SARCOMATOUS TUMOR FROM THE BRAIN.

Spurred by the brilliant though unsuccessful result of operative interference in cranial growths by Godlee, in 1884 (*Lancet*, 1884, vol. ii. p. 1090; 1885, vol. i. p. 13), which had been followed by a case reported by Hirschfelder and Morse (*Pacific Medical and Surgical Journal*, April, 1886, p. 210), and by a third and fourth one by Horsley ("Brain Surgery," *British Medical Journal*, October 9, 1886. Four cases given, two for tumor. Results satisfactory), whose paper, rich in suggestions, was received too late to be of use in the case to be immediately given, surgeons will undoubtedly be led to widen their domain, and exploratory operations in this region of the body will soon become numerous. The history of an unsuccessful case will, however, serve an important purpose, and it is now intentionally brought forward to illustrate strongly the difficulties that surround the subject, not only to the surgeon but to the neurologist who guides the knife.

Mary R., aged twenty-six, was admitted into the hospital, September 16, 1886, with the following history. Has had four operations in this hospital for sarcoma of the neck, the first two years, the last six months ago. In this last operation the left brachial plexus was freely exposed and patient afterward suffered from paralysis of the left upper extremity, from which she has only partially recovered. For two months or more she has been annoyed by precipitate micturition and defecation. Six weeks ago she first noticed cramps in the calf of the left leg which usually occurred at night and prevented her straightening it. At about the same time she noticed that the left knee frequently gave way under her while she was standing, and once or more she fell from this sudden giving way of the left leg. During the last week she has noticed occasional clonic spasms in the left lower extremity. During the past six weeks she has had frequent cramped feelings in the left hand and also numbness, and in last two weeks has had cramps and numbness in the *right* hand. For the past three weeks she has suffered intensely from frontal headache, gener-

ally on the right side, and always worse on walking. Besides this she often feels as if her head were being hammered.

Examination.—No tenderness on any part of scalp or over either supraorbital nerve. No paresis of any muscle supplied by a cranial nerve. Right hand perhaps a trifle weak, but the old paralysis of the left hand prevents any comparative test. She has paralysis of the left sympathetic as shown by narrowing of left palpebral fissure (from sinking of the eyeball) and contraction of pupil. Left biceps, triceps, and deltoid are paralyzed, and there is paresis of left lower extremity below the knee. Left patella reflex exaggerated. Ophthalmoscopic examination shows slight left optic neuritis, the outline of optic disk at exit of large bloodvessels being indistinct.

The paralysis of the left leg slowly deepened, though she would at times have twitching of the right side; and while waiting further developments she, on Oct. 11, became rapidly stupid, and on consultation with Dr. Amidon, who had had the case under observation prior to her coming in the hospital, an operation was advised and performed under his directions.

Operation.—The fissure of Rolando being previously marked out and the tumor located at upper limit of this line one inch from median line by Dr. Amidon, who had kindly seen the patient and advised the operation (scalp being shaved at this point), a crucial incision was made with long limb of cross just in front of and parallel with fissure. Scalp dissected up and with large trephine a button of bone removed from a spot one and a half inches to right of median line. This opening was enlarged by double gouge forceps to a size one and a half by one inch. Dura mater was found to be very tense and bulging. A crucial incision was made through this membrane, whereupon the deeply congested brain substance protruded into the wound. Nothing was felt by the finger, and a needle carried in several directions to varying depths failed to encounter resistance. As the brain projected beyond the skull level, a piece of it as large as half a hen's egg was cut off, and reserved for microscopical examination. Its substance was deeply pigmented and very vascular. Bleeding was quite profuse, and was checked by pressure and Paquelin's cautery lightly applied. The flaps of dura mater were laid over the divided brain and a strip of iodoform gauze over this, one end of which was carried out the posterior angle of the wound. The scalp was sutured closely up to this point and bichloride gauze dressings applied. The iodoform gauze was drawn out forty-eight hours later. Prompt healing of wound occurred, but within six days bulging took place through the cranial opening under the healed scalp and gradually increased till the hernia was the size of a hen's egg.

No unfavorable reaction followed the operation. The following signs of improvement were observed and put down to the lessened brain tension; viz., the headache, which disappeared immediately and did not recur. The spasms of both limbs also ceased, and a temporary improvement in the damaged muscular power of the left side was observed. The character of the removed piece suggested from a gross appearance the possibility that it might be infiltrated with soft sarcomatous growth, but the microscope showed nothing abnormal. In about three weeks after the operation decided signs of

right-sided analgesia and paresis showed themselves more plainly and the same deepened on the left side. It was evident that the neoplasm, or a second one, was situated at the upper portion of the cord or in or near the medulla. The patient gradually became more paralyzed and died December 25th, nearly two and a half months after the operation. The report of the autopsy as made by Drs. Amidon and Vought is appended, with the description, by Dr. Peabody, of the tumor found.

Autopsy.—The hernia cerebri so prominent during life was entirely collapsed. On removing the scalp it was necessary to split some connective tissue growth between scalp proper and the more intimate covering of the hernia. There were slight adhesions around the trephine opening between the dura and pia. On removal of the calvarium considerable apparently disorganized cerebral substance bulged from site of operation. Bloodvessels of pia and pia itself all over the brain normal.

On transverse section through both hemispheres nothing pathological was found except a slight diffuse hardening (probably inflammation) in the centrum ovale underlying the site of operation.

The cerebral ventricles were normal. On examining the base of the brain there was seen a grayish, translucent tumor springing from the under surface of the left lobe of the cerebellum, exerting much pressure on the underlying medulla, which was much crowded to the right and forward. The pressure was exerted on the medulla below the calamus. Medulla at this point much flattened. On dissection the nervous substance of the medulla proved to be entirely uninvaded by the growth, while the connection with the cerebellum was extremely intimate. An incision through the antrum of the left cerebellar lobe showed no diffuse infiltration of that body. The fourth ventricle was invaded by the growth, although apparently removed from pressure by the same. Starting from the cerebellum as described, the growth extended down the left lateral posterior region of the spinal canal, within the dura and apparently outside the pia for a distance of at least ten centimetres, the cord, of course, being crowded much to the right and forward.

Tumor grayish, translucent, and apparently non-vascular and non-inflammatory throughout.

Short segments of three spinal nerves were removed from the left side of neck, probably the fourth, fifth, and sixth. They were found to be normal.

Small subcutaneous tumor (fibrous) taken from back, little below right scapula.

Tumor of cerebellum and cord, on section, proved to be an ordinary spindle-celled sarcoma with many round cells. It was not very vascular, and the stroma was not abundant. Tumor had no connection with cerebellum, it having apparently originated in the pia.

An additional case of supposed tumor in the cerebellum, now in the ward, points out the diagnostic difficulty of such cases, as the examination of four distinguished neurologists assigned different cerebral localities to the growth.

On this, and all points, in fact, connected with this subject, the admirable collection of 100 cases of cerebral tumors with their analysis, by Dr. W. Hale White, lately published in *Guy's Hospital Reports* (vol. xxv. series 3,

1885-1886), will be of great service to the investigator. Of the tubercular tumors, 45 in number, more than half of them occurred in children under ten, and when in adults they usually had tubercular disease elsewhere; like the carcinomatous tumors, 5 in number and all multiple and secondary, these are unfit for surgical interference. Out of the 24 gliomata and 10 sarcomata (cysts being only 4 in number and too rare for consideration), which alone offer a reason for surgical interference, there were only 4 cases that could have been removed with any certainty, and 2 of these were in the cerebellum, and were gliomata. Only 1 of the 10 sarcomata was removable. Aside from the situation often precluding the operation, the frequent occurrence of infiltration of a sarcomatous growth will have the same effect. This existed in the case reported by Hirschfelder, where only a portion of the neoplasm could be taken away, the patient dying from suppurative encephalitis eight days later. White's other cases were: gummy tumors, 5; gliosarcoma, 2; lymphoma, 1; myxoma, 1; doubtful, 3.

Taking into consideration the question whether these tumors could be, during life, localized sufficiently to warrant surgical attack, White found that, from this clinical standpoint, 3 tubercular tumors might have been removed, and that 4 gliomata, 1 sarcoma, 2 cysts, 1 myxoma, and 2 of the 3 doubtful cases, or, in other words, about ten per cent of his collection, might have been operated on, *provided* that a correct diagnosis could have been made, a condition which is sadly nullified by his just statement that the best diagnosticians so frequently make mistakes that a certain number of cases suitable for operation might be failures because the position of the growth will not be exactly made out. For further inquiries concerning this interesting though somewhat obscure and difficult subject, reference should be made to this article *in extenso*.

For the special points in the operative technique, the best that has been given yet is by Horsley, briefly summed up as follows: In addition to the strict antiseptic, he makes, after an oval scalp wound, a very large cranial opening, using trephines two inches in diameter, and replacing the bone when possible; the dura mater is cut nearly round, and turned back like a large flap, and in incising the brain the cuts should be vertical and directed into the corona radiata to avoid damage. Hemorrhage should be checked by pressure; drainage of the wound is also urged.

Stress is laid by him on the immediate bulging out of the brain as indicative of a tumor; it was present in all three of his cases and in my own, but is not met with, he says, in healthy animals on whom he has experimentally tested this. This is, therefore, a symptom of intracranial pressure of high importance.

Of the operations on the neck there was a rather pleasing outcome of an intractable affection shown in a case in which a novelty was resorted to in the

EXTIRPATION OF A SUBHYOID BURSA,

which had existed for fifteen years, in a man of twenty-two, and which had attained the size of a small egg. It had been tapped and injected with tr. iodine four months previously at another hospital. Appreciating the difficulty of dissecting out satisfactorily these troublesome thin-walled cysts, he emptied it with a

trocator canula and injected into it melted paraffine (which liquefies at a point much below 212°), and subsequently cooled it with a small bag of ice. The whole procedure did not occupy five minutes, and by its aid Dr. Weir was enabled with great ease, after exposing it by section through the skin and thyro-hyoid muscle, to remove the entire sac, even up to its attachment at the posterior border of the hyoid bone, which part would undoubtedly have escaped his dissection had the cyst been left flaccid instead of being rendered a hard and tense mass. This method has in other instances served him well, and is to be commended as avoiding the persistence of the fistula which so often results from this bursal inflammation.

In

MAMMARY AMPUTATIONS FOR CANCER

the custom is adhered to of removing not only the entire gland, but also all the axillary contents, even though no enlarged glands are to be felt through the skin or even after the axilla is opened. In doing this the directions first given by Bickersteth, of Liverpool, have been followed by carrying the incision well onto the arm on a level with the insertion of the pectoralis major, and then tearing or cutting through the thin layer of fascia there present, when, with the aid of blunt scissors or the finger-nail, the axillary vein can be isolated in nearly its whole extent, especially if a broad retractor holds up the pectoral muscle. If it cannot be so exposed, and the need exists by reason of glandular growths, the muscles and the pectoralis minor are without hesitation divided. After the vein has been duly cleared, the fatty mass in the axilla is easily peeled away from the chest wall, any veins of size being tied before being divided. The cavity thus made occasionally needs from its extension toward the scapular angles to have the drainage opening for the axilla made well below the line of the incision.

More important, because less known, is the fact that there is frequently found, beside the infected glands near the axillary vein, an enlargement of a lymph vessel with several minute glands, which run under the pectoralis minor in a line toward the sterno-clavicular articulation. He had so often found them since his attention was accidentally called, a few years since, to their presence, that he never failed to hunt for them, and many times to find them.

HERNIA

Six cases of hernia, two strangulated hernia, two irreducible, and two reducible, but all inguinal, were treated by the radical operation of tying off the sac and sewing up the ring by Czerny's method in one case, and in five others by tucking up the sac and sewing up the canal and ring, as has been suggested by Macewen. This latter operation has been simplified (see a paper on "Reducible and Irreducible Hernia," by R. F. Weir, read before the State Medical Society Feb. 3, 1887, *Medical Record*, March 5, 1887) by exposing the external abdominal ring and then pulling apart the tissues over the sac with forceps until the latter is reached, when it can be readily lifted out of its bed with much less disturbance and more certainty than if reached first lower down. Less chance of suppuration also occurs from the slight cellular disturbance thus made. In one case a concealed atrophied testicle was removed, and in

another case of congenital hernia the sac was cut off and a roof thus made to the tunica vaginalis. Whenever omentum is found in a hernia, whether reducible or irreducible, it is carefully tied with multiple and a final encircling silk ligature. Where omental adhesions plugging the internal ring are met with, they are detached with the finger so as to allow the omental stump to drop back into the abdominal cavity.

His individual preference, from a necessarily small experience with it, is for Macewen's operation, as it accomplishes better not only the closure of the peritoneal funnel at the internal ring, but also effects more positively the sealing or narrowing of the inguinal canal. The success of the radical operation as determined by large figures, is about sixty per cent., and from the interannular injection of Heaton, of which one case is reported, about thirty per cent. of cures can be expected in inguinal herniæ of small size and with a yet existing oblique canal. Chromicized catgut is used in the radical operation for sewing up the canal and ring in preference to silk or wire—and among the list is a case where eight months afterward a silk ligature caused an abscess and fecal fistula, which latter promptly closed after the withdrawal of the offending foreign material. He has practised for over two years the healing of the wound by granulation, at least that part of it immediately over the external abdominal ring, as this affords, to his mind, an additional barrier to the relapse of the hernia.

On and about the rectum ten operations have been performed. Three for ischio-rectal abscesses of unusual size, which accounts for their being carried in a report where abscesses and minor operations have been omitted, save where some point of interest could be elicited. Such an instance is present in the four cases of

FISTULA IN ANO

that were divided in the ordinary way. He had had eight cases in which this affection was treated by Jenks's ("New Method of Operating for Fistula in Ano," *Trans. Am. Gynecolog. Soc.*, p. 136, 1883) method of cutting out the fistula and sewing up the fresh surfaces from the bowel to the original skin opening. In three of these eight, the fistulas were not deep and were of moderate extent, and they did well; in the others, five in number, the fistulas had a deep internal orifice, their tracts were either larger or deeper, and in two cases had diverticula, so that the dissection of the suppurating canal itself was difficult, and also the final suturing, particularly in respect to the closure of the bowel end of the incision. And after all this had been done, failure was met with in four out of the five cases. As the last trial was as unfortunate as the first, he could not lay it all to inexperience in the operation, and hence his faith in the method had much lessened.

In the four cases of

HEMORRHOIDS

he had likewise returned to the so-called method of Allingham—after a trial in five cases with Whitehead's ("New Method of Treating Hemorrhoids," *Brit. Med. Journ.*, Feb. 4, 1882) plan of cutting off the pile, tying the main vessels and then sewing together the divided mucous membranes. There was in nearly every one of these cases so much troublesome oozing from the small veins of the divided tissues, which had been cut as in

Allingham's operation, that the little operation was rendered unduly prolonged and annoying, and the result did not show any rapidity in the cure, nor any diminution in the after-pain and other discomfort often encountered in operations for hemorrhoids. He had also, in six cases, tried crushing off the pile after partial section, as has been practised by Mr. Allingham with a fairly satisfactory result, but has had at all times the feeling that the patient would be safer from the risk of hemorrhage with a tied vessel, and not enough advantage has accrued so far to warrant him in incurring further this possible danger.

Two cases of

STRICTURE OF THE RECTUM

have been operated upon.

One case was in a woman, and the stricture, a moderately ulcerated and rather narrow fibrous one, admitting only the little finger, and apparently due to parturient causes, was situated about one and a half to two inches from the anus. Instead of resorting to Verneuil's proctotomy, or its modification by the use of the knife in lieu of the galvanic or wire écrasuer, he put into service a plan which he has now used four times in the last three or four years with excellent results. He had found in practising eight times the free posterior incision of the rectal stricture with its conjoined incision reaching back to the coccyx, that the subsequent healing of the external wound was very tedious, frequently occupying more than a year, and was also associated with more or less loss of sphincter power. So, as before stated, he has changed this cut, particularly in strictures situated within two and a half inches from the anus, to one made posteriorly to the coccyx or sacrum, after stretching the anus, without dividing the external sphincter. To avoid the collection and retention of secretion in this wound pouch, a puncture with a knife is made from the point of the coccyx to the wound in the bowel, and through this is carried a drainage tube. In other words, a traumatic fistula in ano is made. The wound in the bowel is then packed with iodoform sticky gauze, and an antiseptic dressing applied over the anus. The bowels are kept quiet for several days, and if the temperature shows that all is going well, the drainage tube is withdrawn on the third or fourth day. In every one of the instances in which this plan has been tried the tube opening has promptly closed up, so that no fear of a permanent establishment of a fistula need, he thinks, be entertained. The use of a large bulbous or rubber bougie, is subsequently kept up at regular intervals, according to one's judgment.

The result as to relapse by this plan have been, as to the stricture, equally satisfactory with the major operation, and more so as to rapidity of cure. For higher strictures, the open method is wiser, as it admits of the knowledge and repair of every damage that may be possibly done to the peritoneum.

One case of

SPINA BIFIDA

was treated by injection in a child, eight months old, in whom the tumor, the size of a large orange, was situated on the upper part of the sacrum. Cutaneous outgrowths rose up on its base nearly to its vertex, where they were lost in a thin, pellucid cyst-wall. Puncture had been tried some weeks previously,

with aggravation of the existing paralysis of the legs. The child was in robust health. After withdrawing, by a needle thrust through the adjacent sound skin into the tumor, about one drachm of a clear, colorless fluid (which was subsequently found to be sugarless), a similar quantity of Morton's fluid was slowly thrown in. This fluid consists of 10 grs. of iodine, with 30 grs. of iodide of potassium, dissolved in $\frac{3}{4}$ of glycerine. No special reaction followed its use, but the swelling a month later was decidedly less in size, though it is probable that a repetition of the injection will be necessary. In the *Transactions of the Clinical Society* for 1884 and 1885, 50 cases are given of this treatment, with 41 successes, as opposed to the use of the simple tincture of iodine, of 20 cases and 5 deaths.

In the genito-urinary subdivision of the operations on the trunk there have been 24 cases. Among these there is one of

VARICOCELE

treated by a method (*Medical Record*, March 20, 1886) which he had elsewhere seen suggested, and which was as suitable for those of large size—that is, by ablation of the scrotum, and the subsequent ligation of the exposed and easily attacked veins, care being taken to leave untied the packet of veins accompanying the vas deferens.

Beside this, two cases of

DOUBLE HYDROCELE

were treated by Volkmann's method, as they were considered too large to be remedied by the carbolic acid injection of Levis, which is yet considered the best treatment for hydroceles of ordinary size, or even of large size, if a preliminary tapping be resorted to, to diminish them.

In all the

URETHRAL OPERATIONS

it is the custom to smear the hair of the pubis and perineum with iodoformed oil, gr. iv ad $\frac{3}{4}$ of fluid cosmo-line, and to inject a small syringeful of the same into the urethra before any instrument is introduced into the canal. All these latter are greased with iodoformed vaseline, $\frac{3}{4}$ ad $\frac{3}{4}$ (which keeps freer from chemical change than does the oil).

URETHROTOMY.

For the division of deep and even tight anterior strictures reliance is placed on Maisonneuve's urethrotome, whose blade cutting upward he has had enlarged to one of 11 mm. in breadth, but even with this a cut made in the usual manner can enlarge the canal only to about the size of a No. 26 French sound, but by twisting the handle of the cutting blade as it comes forward from beyond the already divided stricture a second cut may be made in the roof of the urethra. By this means enlargement to 32 or 34 of the French scale, and sometimes more, can be obtained. If any anterior obstructions of large size are met with, they are cleared away by Otis's urethrotome. After all the cutting has been done, including the division of the meatus urinarius, the urine is drawn, and the bladder washed out several times with a 1 to 10,000 bichloride solution, and the urethra is also flushed generously with the same solution as the catheter is withdrawn. The penis, if any anterior coarctations have been divided, is snugly bandaged, and the

patient given, two or three times for the first twenty-four hours, $\frac{1}{8}$ gr. morphine, with 3 to 5 m. tr. aconit. rad. No instrument is passed until four to seven days have elapsed, and not then if any temperature elevation should exist. By this means urethral fever has practically been abolished, and, for this reason, the plan of action has been detailed at this length. Before leaving the hospital, every patient is provided with a proper sound, and taught to use it.

External urethrotomy was done in a case of recently received

RUPTURE OF THE URETHRA

from falling astride a step-ladder, cutting into a mass of extravasated blood, in which the ends of the membranous urethra were found to be torn across and jagged. The proximal end of the urethra was more clearly made out by the prolonged use of a douche of hot water, which stopped the oozing of fresh blood, and also washed away the obscuring clots, etc., and left the urethra to stand out white and sharply defined. This expedient has proved of service in several other cases in which difficulty till then had existed in distinguishing the position of the urethra. The prompt employment of incision for a ruptured urethra is still recognized as one of the decided modern improvements in surgery. The patient did well.

Of more interest was a case of

SUPRAPUBIC CYSTOTOMY FOR SUPPOSED TUMOR,

which operation was done in a man of twenty-four, who had been passing bloody urine for six months previously with moderate pain and increased frequency. No enlargement of prostate or renal tenderness detected. A searcher in the bladder failed to touch a calculus. No renal elements were found on microscopically examining the urine, nor was any portion of a tumor cast off, though repeated search was made among the many small clots passed. The pain in the bladder on sudden motion became more marked and he was, early in December last, placed under ether and the bladder thoroughly examined by the bimanual method, also by sound and by lithotrite, and also by Bigelow's aspirator. No calculus was found nor evidence of tumor obtained. One mass removed showed a small collection of shapeless epithelial cells, but no stroma. It was decided to explore the bladder by the suprapubic cut. This was done December 23d, after the rectum had been distended with a bag holding eight ounces of water (see remarks on this point in THE MEDICAL NEWS, of December 4, 1886), and then the bladder filled with first six and a half ounces of 1:100 carbolic acid solution; but as no distinct elevation of the bladder above the pubes could be felt, a further three and a half ounces were slowly introduced, when the top of the bladder was lifted one and a half inches above the bone. The bladder was reached by the usual incision and opened with but little hemorrhage. The exploring finger did not feel any calculus or any tumor, as was expected. Inspection of the bladder was rendered difficult by the great rigidity of the strongly developed recti muscles, acting as they did more than usual, owing to the difficulty in maintaining perfect ether anæsthesia. By blunt retractors introduced into the bladder wound and by raising the heels of the patient over an attendant's shoulders, as suggested by Trendelenburg, Dr. Weir

was enabled to secure, with the additional aid of a small portable electric light, a very good view of the bladder: only an intensely congested and easily bleeding mucous membrane was seen. No attempt was made to sew up the wound, which was packed lightly with sticky iodoform gauze after a drainage tube had been inserted, and the patient kept turned on alternate sides for three days, when the tube was also removed.

No reaction followed the operation, but the bloody urine continued to be passed, and two weeks later, the wound still admitting a finger, the patient was again etherized with the idea of isolating the mouth of the ureters and thus ascertain whether the hemorrhage came from the kidneys. This was soon proved to be a difficult affair; the use of various endoscopic tubes and mirrors and even a long but narrow glass speculum was inefficacious in obtaining the desired view, and the insertion and dilatation of Peterson's rectal bag with seven and a half ounces of water, while it brought the base of the bladder one inch nearer the surface and closer to the pubis, did not serve to permit the recognition of the orifices of the ureters. The hindrance was, as before, mainly due to the difficulty of overcoming by ether the strong resistance of the well-developed recti muscles. It was, however, seen that the lower part of the bladder was studded over with a number of elevations the size of hempseed, which bled freely when rubbed by an instrument. Three weeks later the suprapubic opening closed, and patient's urine is becoming less and less bloody, but the solution of the case cannot yet be fairly claimed to have been made. He still remains under observation.

(To be concluded.)

OBSTETRICAL SOCIETY OF PHILADELPHIA.

Stated Meeting, February 3, 1887.

THE PRESIDENT, THOMAS M. DRYSDALE, M.D.,
IN THE CHAIR.

DR. H. A. KELLY called the attention of the Society to an external direct method of

MEASURING THE CONJUGATA VERA,

which he had found of extreme value in a large number of non-pregnant gynecological cases which had come to him complaining of difficulties since a previous confinement.

A short vagina, or cellulitis, or cicatricial contractions, often prevent the finger in the vagina from reaching the promontory. In a case he had examined in the morning, the short vagina prevented the vaginal finger reaching the promontory while the outside hand rested upon it, and on pressing deeper felt the vaginal fingers fully three centimetres below. This case was measured by the outside hand and determined normal. Another case had a rachitic pelvis $8\frac{1}{2}$ cm. conjugate. She had borne ten children at term through difficult labors, but without assistance.

The method is simple, avoids a vaginal examination in the virgin, is invaluable in many cases retrospectively and prognostically. The inaccuracy of the external conjugate is well known. This, of course, is of no

use in the most important class of cases, the advanced pregnant, but it does often afford invaluable facts in other cases.

The method is to press deeply with the finger tips of the extended hand until the promontory of the sacrum is felt, then by slipping the fingers up and down over this until the relations are well appreciated, let the fingers rest vertically above the angle and at the same time mark on the palm with the finger of the other hand the position of the posterior surface of the symphysis, also vertically below. This measurement from the mark thus made to the tip of the finger is the conjugata vera thus directly measured.

DR. MONTGOMERY, in a paper entitled

TRACHEOTOMY AND INTUBATION IN DIPHTHERIA,

urged the importance of early operation. The symptom which should indicate the necessity for operation was depression of the substernal region during inspiration. This symptom indicates the inefficient entrance of air to fill the lungs, and the diaphragm becomes a fixed point depressing the soft tissues. The longer this condition continues the greater the danger of collapse of portions of lung tissue. The large mortality after tracheotomy and intubation is due to the postponement of operative interference in the majority of cases, until these changes have occurred. This assertion is verified by his own experience in tracheotomy. In his first ten cases, in all but one of which the operation was done as a last resort, none recovered. In the next seven cases in which, excepting two, it was done early, five recovered. The two fatal cases were not considered hopeful at the time of operation. His eighteenth case died before the trachea was opened. Of the last ten, five recovered. Twenty-eight cases with ten recoveries.

He has practised intubation in thirteen cases with six recoveries. All but one of these cases were seen in consultation, and some of them were in a dying condition when intubation was practised. In no case did death occur in less than twenty-four hours, and in all the relief from the dyspnoea was prompt and permanent. The youngest child was eighteen months of age, and died on the fifth day of convulsions. The youngest child to recover was aged two years. In one case of recovery tracheotomy was performed the day following the intubation. A smaller size tube than suited for its age had been used; the dyspnoea recurring and the tube absent from the glottis, it was feared that it had been passed into the trachea. It was found that the tube was coughed up and swallowed, and passed per anum two days later. Of course, in this case, little can be claimed for intubation.

He prefers intubation to tracheotomy, and believes that the former will supplant the necessity of doing the latter. The advantages are: It is free from danger, it requires no cutting or anæsthetic. The after-treatment does not require skilled attention, as the air is moistened and warmed by the natural passages before entering the trachea; there is, therefore, no mucus accumulating in the tube, and not the same danger of secondary inflammatory lesions. As the tube does not fill up the calibre of the trachea, membrane is coughed up around instead of through it, and thus the danger of blocking is avoided.

MONTREAL MEDICO-CHIRURGICAL SOCIETY.

Stated Meeting, January 28, 1887.

THE PRESIDENT, J. C. CAMERON, M.D., IN THE CHAIR.

MYXŒDEMA COMING ON DURING THE COURSE OF CHRONIC TETANY.

DR. STEWART exhibited a man, aged forty-one years, who had suffered during the past six years from tetany. The contractions, which affect the muscles of the hands and face principally, usually come on monthly, and last from two to six days. During the past year, however, the tetanic symptoms have not been so severe or so frequent as formerly. This change, which was at first attributed to the treatment employed (galvanism and perchloride of mercury), is more likely due to a change in the course of the disease, possibly to a more advanced stage.

About eighteen months ago it was noticed that his speech was slow. He complained that it was difficult for him to answer a question at once. Œdema of the extremities and face is now apparent; it is of a solid character, not pitting on pressure. He complains of general numbness. The hands have the broad, spade-like shape so constant a feature of myxœdema. There is no thyroid gland tissue to be made out. The skin is dry and harsh. His temperature is almost constantly subnormal.

The symptoms at present may be summarized as follows: 1, profound anæmia; 2, slowness in thinking; 3, slowness in speaking; 4, slowness in moving; 5, solid œdema; 6, atrophy of the thyroid; 7, subnormal temperature; 8, harsh and dry skin.

Before the development of the mucinoid state, and during the tetanic period, there was marked increase in the electric irritability of the nerves to galvanism; 0.25 of a milliampère was sufficient to bring about contraction of the muscles supplied by the facial. It now takes 1.25 of a milliampère to induce a similar contraction; the KSZ = AOZ. With the exception of a slightly diminished quantity of urea, the urine is normal. No relative increase in the number of leucocytes, no diminution of red, no enlargement of spleen or lymphatic glands.

The reader of the paper remarked that this, so far as he knew, was the first recorded case of myxœdema following or coming on during tetany. Dr. W. Ord, about a year ago, read the details of a case of myxœdema before the Medical Society of London, where there was persistent flexion of the arms. This condition is, however, entirely distinct from typical tetany.

The case under observation is not unlike the condition seen in the monkeys from which Mr. Victor Horsley removed the thyroid. When they lived several weeks the preliminary tetany stage gave place to a mucinoid condition (myxœdema). Horsley and others believe that myxœdema, both surgical and idiopathic, is due to removal or disappearance of the thyroid. The ultimate cause of tetany is attempted to be explained in the same way. If this is so, why does not removal of the thyroid always bring on myxœdema? It is only in a very small percentage of the complete removals that it sets in. In Billroth's forty cases of complete extirpation there was not a single case. The cause is more likely to be found in injury or damage to the sympathetic. The atrophy

of the thyroid gland is, according to this view, a symptom and not the cause of myxœdema.

DR. T. WESLEY MILLS said that to believe that any gland or other organ existed to prevent the formation of a substance, whether normal or abnormal, is inconsistent with general physiological principles. True, the removal of certain glands, as the testicles in the young, arrested development, both physical and psychical. In the adult dog such removal is followed by obesity, which can be largely accounted for by the inactivity of the animal, associated with the psychical shrinkage, the curtailment in the number and variety of the afferent impulses reaching the nerve-centres. It has been asserted that after the removal of the thyroid in children there is stunted development, especially intellectually. Dr. Mills thought it likely that metabolic changes follow the removal of the thyroid, owing to the influence on the nervous system, for there is a loss of balance; all healthful life implies balance of function. It is not yet clear how the balance is destroyed by removal of the thyroid, but we are on the way to knowledge, for we have learned, experimentally, that this organ is not a blood-former. If, as has been suggested, the changes following experimental or surgical removal are due to injury of the sympathetic, one would expect to observe vasomotor symptoms. This has not been the case, though such an objection must not be too strongly insisted upon, for though dilatation follows section of the cervical sympathetic, it is not permanent, and, if transient, may be overlooked.

DR. RICHARD MACDONNELL said that the patient had been under his care in the Montreal General Hospital for some time, during which he had been carefully observed, and no symptoms of tetany were ever present; but he understood Dr. Stewart to say that he had himself seen the man in a tetanic fit. He thought the case a doubtful one of myxœdema, and would not be prepared to say that the thyroid gland was absent; in many it is difficult sometimes to make out the gland by external manipulation.

DR. SHEPHERD could not agree with Dr. Stewart's suggestion that the reason myxœdema or cachexia strumipriva follows excision of the thyroid is because of the disturbance damage done to the sympathetic system, as this affection, so far as he knew, never follows the extensive operations in the neck (as removal of chains of enlarged glands and tumors), when the sympathetic trunk is quite as much interfered with as in the operation of removal of the thyroid. Those cases which do not become myxœdematous after removal of the thyroid, are now supposed to be cases of incomplete removal, or where abnormal outlying portions of the gland have been left behind.

NEWS ITEMS.

PARIS.

(From our Special Correspondent.)

PERMANENT SUTURE OF BONES.—DR. F. GUERMONPREZ, of Lille, has been recently advocating the permanent suture of bones. Steel threads he finds are durable and supple, but not antiseptic; silver and platinum threads have the same qualities as steel threads, and are moreover antiseptic. Threads made with fibres of

vegetable origin cannot be employed for permanent ligatures. Among the threads formed from animal substance he finds that catgut is inefficient in osseous suture. Silk is badly tolerated by osseous tissue. Thread made of whale's tendon is formed of fibres wound round each other as the best ropes and cables are made. If silkworm gut is macerated during six weeks in carbolic solution (2 to 5 per cent.) its antiseptic property is insured.

DR. P. BIGO, of Caudry, communicated the following details concerning osseous suture to the *Société de médecine de Strasbourg*. A child, six and a half years old, fell from a height of thirty-three feet on the 13th of July, 1885. There was cerebral contusion, and the child was unconscious during ten days; the two bones of the left forearm were fractured, close to their lower extremity; there was also compound fracture of the two bones of the right forearm. Notwithstanding treatment, a pseudarthrosis of the right arm remained.

On January 13, 1886, MM. Guérmonprez and Duret performed a resection. Four days after the operation the drain of the ulnar wound was removed; that of the radial wound was reduced to half its length.

On the eleventh day all the stitches made by the cutaneous suture, and the remaining portion of the drain, were removed. Reunion was obtained without difficulty.

On the sixty-sixth day consolidation was complete; the actions of pronation and supination were effected, the child could write, and raise objects, by holding the limb in a horizontal direction.

There was no induration, nor any callus, at the level of the osseous sutures, which had been effected with silkworm gut. The limb was freed from every apparatus and dressing.

M. DURET in treating a club-foot recently practised cuneiform resection of parts of the cuboid and the neighboring bones. Seven suture stitches with single threads of silkworm gut were inserted, and adjustment was satisfactorily effected. The reunion of the skin was obtained without difficulty, and the osseous tissue tolerated the silkworm gut. This material is, therefore, preferable to others in permanent bone sutures. It is tolerated as well as catgut and the best metallic threads; and, if used double, is quite as solid.

MEDICAL PRACTICE IN CHINA.—From a recent report of St. Luke's Hospital, at Shanghai, we learn the following regarding the diseases of the Chinese: As might be inferred, the most common forms of disease are malarial, and nearly every disease is more or less modified by this prevailing influence. Intermittent, remittent, and typho-malarial fevers are very common. Both adults and children suffering with enlarged spleen are encountered every day. There is a very remarkable predominance of the *quartan* type of intermittent fever, just the reverse of what occurs in malarious districts in the United States. Again, the paroxysm of fever is most likely to come on in the afternoon, or at night, thus differing from what we see at home. Next in frequency are diarrhoea, dysentery, and liver troubles—abscess of the liver is not uncommon. Nearly all the zymotic diseases flourish. Smallpox is spread every winter by the custom of inoculation. This is done by putting the variolous matter on a rag and inserting it up one nostril. No care is taken to isolate patients suffering from this

disease. Measles are very common, and it is a well-known fact that one attack of measles here is no protection from the disease at home. The same statement has been made about whooping-cough; this, however, lacks confirmation. Typhoid fever claims many victims—especially in the autumn. Typhus occurs from time to time. A few cases of Asiatic cholera occur among the Chinese every year. Occasionally the disease takes on an epidemic form, then hundreds and thousands are swept away. The general idea amongst the foreign doctors here seems to be that water is the most common vehicle for the spread of this disease. The idea that great care in the preparation of food and drink is the best prevention of an attack of cholera, seems to be borne out by the comparative freedom from cholera enjoyed by foreigners, though they live here subject to the same conditions as to climate and surroundings as the native population. The few foreigners attacked are usually sailors or others who are exposed to the evil effects of bad food and impure water. A striking example of what can be done in the way of prevention in this disease came under the observation of the writer. During the height of the worst cholera season which has been seen in Shanghai for the last twenty-five years, a man-of-war arrived in port with orders to remain here. The commanding officer and the senior surgeon had the good sense to work in unison for protection against the spread of the disease. No one was allowed on shore except on official business, the boats' crews were not allowed to land, no one slept on shore. Only distilled water was used, no fruit or vegetables were allowed on board. Officers and men lived on the ship's stores. This vessel remained six weeks in port and finally went to sea. Not one case of cholera appeared on board. This ship was moored right in front of the foreign settlement. She was surrounded by other men-of-war. The writer saw burial parties leaving early every morning from the other ships and knew that their crews were decimated by the cholera. Seven hundred foreigners, mostly from the shipping, fell victims to the cholera during this season. None of the other ships took the precautions observed by the ship I speak of. These are facts: they can speak for themselves. Owing to the coarse, badly prepared food of the poorer Chinese, consisting for the most part of salted fish, or stale bacon, mouldy beans, pease, rice, sea-weed, and cabbage, dyspepsia in all its protean forms is common. All diseases of the eye prevail—conjunctivitis, granular lids, entropion, and pterygium are the most common forms. In this part of China the people seldom consent to an operation on the eye, demanding to be cured by the application of medicine alone. A few submit to operations. Almost every medical report written in China speaks of the universal prevalence of skin diseases, specially the parasitic varieties. This is very truthfully attributed to the want of cleanliness. Still, a large number of non-parasitic complaints are found, and, I think, not enough stress has been laid upon the overcrowding, foul air, and poor nourishment as factors in the production of these diseases. This is shown by the readiness with which they yield to treatment when admitted to the wards of the hospital. Here, in addition to the baths and clean clothing, they have pure air, good food, and cheerful surroundings, which do quite as much, or more, for the

cure of these complaints as the medicines administered. Beri-beri is not uncommon, many patients have it in a mild form which shows a tendency to recovery during the winter months; relapses, however, are frequent. When the patient is attacked with the severe form of the malady, with marked numbness of the extremities and round the mouth, pains in the legs and general anasarca, residence in a hill country seems to offer the only chance of relief. The Chinese are peculiarly liable to the formation of large abscesses. The most common are those in the subcutaneous areolar tissues of the chest, back, and the upper and lower extremities. These abscesses frequently attain an enormous size before the patients apply for relief. Post-pharyngeal, psoas, lumbar, perityphlitic, perinephritic, abscesses in the sheath of the rectus abdominis muscle, and, in fact, every variety of abscesses are much more frequently encountered here than they are at home.

OBITUARY RECORD.—FENNER HARRIS PECKHAM, M.D., one of the oldest and best known physicians in Rhode Island, died at his home in Providence, on the 17th of February.

He was born in 1820, in Killingly, Conn. His father, Dr. Hezael Peckham, was an able and noted physician. The son was graduated from Yale Medical College in 1842, and practised in East Killingly—now known as Putnam Heights, till 1852, when he removed to Providence, when he at once acquired a large practice.

He became a Fellow of the Rhode Island Medical Society and was for two years its President. Besides addresses and reports of special cases, he was the author of a monograph on "Hydrophobia," read before the American Medical Association, and also one on "The Topographical and Geological Condition of the Second District of Rhode Island." For several years he was physician to the Marine Hospital at Providence.

In 1861, he was commissioned Surgeon of the Third Rhode Island Heavy Artillery Regiment.

In 1863, he was appointed Surgeon of the Board of Enrollment of the Second District of Rhode Island. The cause of death was chronic Bright's disease, from which he had suffered for nine years, during which period he had not been in active practice.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM FEBRUARY 22 TO FEBRUARY 28, 1887.

HUNTINGTON, DAVID L., *Major and Surgeon*.—Ordered for duty at San Diego Barracks, California, and granted leave of absence for one month from March 1, 1887.—S. O. 45, A. G. O., February 25, 1887.

WHITE, ROBERT H., *Captain and Assistant Surgeon*.—On being relieved by Major Huntington, to proceed to Angel Island, California, and report to commanding officer for duty at that post.—S. O. 45, A. G. O., February 25, 1887.

TESSON, LOUIS S., *Captain and Assistant Surgeon*.—Ordered for duty as attending surgeon at Headquarters, Division of the Missouri, and Examiner of Recruits at Chicago, Ill.—S. O. 44, A. G. O., February 24, 1887.

BARROWS, CHARLES C., *First Lieutenant and Assistant Surgeon*.—Resignation accepted by the President, to take effect February 17, 1887.—S. O. 42, A. G. O., February 19, 1887.

BLACK, CHARLES S., *First Lieutenant and Assistant Surgeon*.—Ordered from Fort Clark, Texas, to Fort Davis, Texas.—S. O. 23, Department of Texas, February 18, 1887.

MASON, CHARLES F., *First Lieutenant and Assistant Surgeon*.—Resignation accepted by the President, to take effect March 25, 1887.—S. O. 44, A. G. O., February 24, 1887.